

ภาคผนวก ค

ผลการตรวจวัดคุณภาพสิ่งแวดล้อม

ภาคผนวก ค-1

ใบรับรองผลการตรวจวัดคุณภาพอากาศในบรรยากาศ



Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610812

Date Received : Mar 10, 2026
Date Reported : Mar 13, 2026
Report Number: 3500734-1

Page 1 of 1

Sample Description Air Quality
Location SCG site 3 (GPS 47P 0734016, 1406627)
Parameter Nitrogen dioxide (ppb)
Measurement Date Mar 02, 2026 - Mar 09, 2026
Measurement by Santi Chaichana

	2610812-1 Mar 02, 2026	2610812-2 Mar 03, 2026	2610812-3 Mar 04, 2026	2610812-4 Mar 05, 2026	2610812-5 Mar 06, 2026	2610812-6 Mar 07, 2026	2610812-7 Mar 08, 2026
Time							
10:00 AM - 11:00 AM	3.8	8.9	10.8	16.5	3.5	2.9	3.5
11:00 AM - 12:00 PM	2.2	5.1	15.0	18.7	6.2	1.5	3.8
12:00 PM - 01:00 PM	7.4	22.7	19.7	14.8	5.5	1.8	5.0
01:00 PM - 02:00 PM	9.3	30.4	23.6	20.5	16.0	3.1	10.2
02:00 PM - 03:00 PM	18.5	32.5	13.8	15.8	15.6	3.0	14.2
03:00 PM - 04:00 PM	11.2	36.1	14.3	15.4	7.7	9.9	11.7
04:00 PM - 05:00 PM	11.2	19.0	24.6	16.5	13.0	9.5	10.7
05:00 PM - 06:00 PM	12.6	10.9	22.5	13.2	9.3	11.0	10.2
06:00 PM - 07:00 PM	11.5	7.0	15.6	5.2	10.1	10.5	7.8
07:00 PM - 08:00 PM	9.4	7.1	7.2	6.6	2.4	7.3	11.3
08:00 PM - 09:00 PM	5.0	5.9	8.7	7.2	8.1	7.1	8.0
09:00 PM - 10:00 PM	4.2	3.7	4.0	5.6	7.7	11.3	8.5
10:00 PM - 11:00 PM	4.7	2.8	2.9	12.3	7.9	13.4	12.8
11:00 PM - 12:00 AM	11.6	6.1	2.6	7.1	7.7	12.4	11.5
12:00 AM - 01:00 AM	7.7	7.0	4.0	5.6	9.0	16.8	9.5
01:00 AM - 02:00 AM	7.7	10.5	6.9	5.0	11.2	12.9	3.4
02:00 AM - 03:00 AM	5.9	11.0	5.2	6.0	12.5	11.4	3.1
03:00 AM - 04:00 AM	8.4	12.2	9.3	6.5	14.7	8.6	8.4
04:00 AM - 05:00 AM	4.0	4.2	9.1	7.0	16.9	11.5	10.7
05:00 AM - 06:00 AM	5.6	6.3	6.1	12.4	16.7	14.0	14.9
06:00 AM - 07:00 AM	6.5	10.1	8.9	12.7	16.7	16.2	13.0
07:00 AM - 08:00 AM	8.8	15.3	10.1	13.4	18.3	17.6	14.8
08:00 AM - 09:00 AM	9.5	13.9	10.0	7.2	18.2	10.7	12.9
09:00 AM - 10:00 AM	10.0	11.6	17.0	4.3	8.7	5.3	6.1
Average	8.2	12.5	11.3	10.6	11.0	9.6	9.4
1hr - Maximum	18.5	36.1	24.6	20.5	18.3	17.6	14.9
Standard 1hr - Average	120	120	120	120	120	120	120

Standard : Notification of the National Environment Board B.E. 2569.
Reference Method : U.S. Environmental Protection Agency Method Part 50 App. F (Chemiluminescence)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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



Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610812

Date Received : Mar 10, 2026
Date Reported : Mar 13, 2026
Report Number: 3526982-1

Page 1 of 1

Sample Description Air Quality
Location วัดหนองแฟบ (GPS 47P 0729822, 1403304)
Parameter Nitrogen dioxide (ppb)
Measurement Date Mar 02, 2026 - Mar 09, 2026
Measurement by Santi Chaichana

	2610812-8 Mar 02, 2026	2610812-9 Mar 03, 2026	2610812-10 Mar 04, 2026	2610812-11 Mar 05, 2026	2610812-12 Mar 06, 2026	2610812-13 Mar 07, 2026	2610812-14 Mar 08, 2026
Time							
09:00 AM - 10:00 AM	16.8	7.8	4.2	6.6	12.1	8.2	13.1
10:00 AM - 11:00 AM	16.5	4.3	3.9	19.5	20.6	10.9	17.4
11:00 AM - 12:00 PM	15.4	3.9	4.0	23.7	21.9	3.2	11.8
12:00 PM - 01:00 PM	10.8	4.1	3.8	23.7	22.6	3.1	7.5
01:00 PM - 02:00 PM	2.8	3.7	3.7	9.7	7.0	5.6	3.9
02:00 PM - 03:00 PM	4.0	3.5	3.6	5.3	5.1	4.6	4.0
03:00 PM - 04:00 PM	4.5	3.6	3.6	4.8	4.1	3.5	3.3
04:00 PM - 05:00 PM	5.0	3.6	3.7	3.9	4.2	3.2	4.2
05:00 PM - 06:00 PM	3.9	6.5	3.9	5.6	3.9	2.6	4.2
06:00 PM - 07:00 PM	4.8	4.4	4.1	4.9	3.2	2.7	5.2
07:00 PM - 08:00 PM	3.8	4.7	3.9	5.1	4.8	6.2	4.8
08:00 PM - 09:00 PM	4.3	5.7	3.6	5.6	6.2	4.6	3.3
09:00 PM - 10:00 PM	4.8	4.8	3.5	4.0	8.3	4.8	2.2
10:00 PM - 11:00 PM	4.7	4.0	3.4	3.5	7.5	5.7	1.9
11:00 PM - 12:00 AM	3.7	3.6	3.4	4.7	5.0	3.4	1.6
12:00 AM - 01:00 AM	3.6	3.6	3.3	4.4	3.8	2.7	1.9
01:00 AM - 02:00 AM	3.8	3.4	3.3	10.6	5.9	3.4	2.9
02:00 AM - 03:00 AM	3.7	3.6	3.3	5.1	4.1	3.4	4.7
03:00 AM - 04:00 AM	4.3	3.5	3.3	9.1	3.2	3.7	2.2
04:00 AM - 05:00 AM	4.9	3.3	3.3	6.4	2.8	4.0	4.8
05:00 AM - 06:00 AM	5.9	3.4	3.2	9.0	2.4	3.7	5.3
06:00 AM - 07:00 AM	13.0	3.7	3.3	11.4	2.8	3.4	8.1
07:00 AM - 08:00 AM	13.8	3.8	4.9	10.0	3.3	4.4	2.6
08:00 AM - 09:00 AM	5.1	5.0	4.2	10.1	5.8	7.0	11.5
Average	6.8	4.2	3.7	8.6	7.1	4.5	5.5
1hr - Maximum	16.8	7.8	4.9	23.7	22.6	10.9	17.4
Standard 1hr - Average	120	120	120	120	120	120	120

Standard : Notification of the National Environment Board B.E. 2569.
Reference Method : U.S. Environmental Protection Agency Method Part 50 App. F (Chemiluminescence)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610812

Date Received : Mar 10, 2026
Date Reported : Mar 13, 2026
Report Number: 3526984-1

Page 1 of 1

Sample Description Air Quality
Location รร.บ้านนาตาพฤฒ (GPS 47P 0735360, 1406712)
Parameter Nitrogen dioxide (ppb)
Measurement Date Mar 02, 2026 - Mar 09, 2026
Measurement by Santi Chaichana

Time	2610812-15 Mar 02, 2026	2610812-16 Mar 03, 2026	2610812-17 Mar 04, 2026	2610812-18 Mar 05, 2026	2610812-19 Mar 06, 2026	2610812-20 Mar 07, 2026	2610812-21 Mar 08, 2026
11:00 AM - 12:00 PM	5.8	9.7	16.4	18.5	7.2	3.1	3.4
12:00 PM - 01:00 PM	3.1	18.4	19.7	18.6	5.6	6.1	7.7
01:00 PM - 02:00 PM	14.2	23.6	23.9	14.5	8.2	5.6	13.0
02:00 PM - 03:00 PM	15.0	12.7	25.4	6.6	23.1	5.6	16.8
03:00 PM - 04:00 PM	9.2	10.3	19.8	7.2	17.7	8.5	9.1
04:00 PM - 05:00 PM	10.3	14.7	19.6	8.3	12.8	14.7	7.2
05:00 PM - 06:00 PM	10.8	9.2	9.9	9.2	11.1	12.3	10.4
06:00 PM - 07:00 PM	11.5	11.6	14.3	13.1	11.9	14.2	8.6
07:00 PM - 08:00 PM	11.7	11.7	12.7	14.8	6.6	14.2	10.7
08:00 PM - 09:00 PM	10.1	9.3	13.3	13.1	8.0	14.0	16.3
09:00 PM - 10:00 PM	8.1	8.0	11.0	10.6	8.0	12.0	16.5
10:00 PM - 11:00 PM	7.1	6.6	6.9	12.9	9.7	12.5	9.9
11:00 PM - 12:00 AM	6.5	5.2	6.2	7.5	9.8	12.8	11.4
12:00 AM - 01:00 AM	9.0	4.7	3.9	6.9	9.9	8.2	11.3
01:00 AM - 02:00 AM	12.0	8.6	4.0	7.4	11.9	8.1	6.8
02:00 AM - 03:00 AM	5.8	10.6	3.2	6.4	13.1	9.4	8.1
03:00 AM - 04:00 AM	11.3	5.8	4.2	8.7	14.3	8.0	8.2
04:00 AM - 05:00 AM	5.9	10.8	6.9	14.5	15.2	11.7	11.1
05:00 AM - 06:00 AM	7.9	9.7	10.5	15.3	14.8	14.0	11.8
06:00 AM - 07:00 AM	8.9	11.6	12.7	11.0	12.0	13.6	11.8
07:00 AM - 08:00 AM	9.0	13.8	15.0	13.4	15.5	14.0	13.3
08:00 AM - 09:00 AM	8.1	10.9	12.2	5.9	17.0	9.3	12.7
09:00 AM - 10:00 AM	11.8	9.4	22.6	4.7	7.6	5.5	6.8
10:00 AM - 11:00 AM	10.9	9.4	19.9	4.7	3.9	3.4	7.0
Average	9.3	10.7	13.1	10.6	11.5	10.0	10.4
1hr - Maximum	15.0	23.6	25.4	18.6	23.1	14.7	16.8
Standard 1hr - Average	120	120	120	120	120	120	120

Standard : Notification of the National Environment Board B.E. 2569.
Reference Method : U.S. Environmental Protection Agency Method Part 50 App. F (Chemiluminescence)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

Page 1 of 21

Sample Number 2610817-1
Sampled Date Mar 02, 2026
Sample Description Air Quality
Location SCG site 3 (GPS 47P 0734016, 1406627)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 32.1 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	02/03/26 - 03/03/26	ppm	-	1.0	2.4	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	02/03/26 - 03/03/26	ug/m3	-	2.0	38.8	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

Guideline :

NEB : Notification of the National Environmental Board., 2026 (B.E.2569) dated January 21, 2026

Sampled By : Santi Chaichana

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.

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

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TESTING
No.0042

Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

Page 2 of 21

Sample Number 2610817-2
Sampled Date Mar 03, 2026
Sample Description Air Quality
Location SCG site 3 (GPS 47P 0734016, 1406627)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 31.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	03/03/26 - 04/03/26	ppm	-	1.0	2.5	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	03/03/26 - 04/03/26	ug/m3	-	2.0	59.5	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

Guideline :

NEB : Notification of the National Environmental Board., 2026 (B.E.2569) dated January 21, 2026

Sampled By : Santi Chaichana

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Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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TESTING
No.0042

Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

Page 3 of 21

Sample Number 2610817-3
Sampled Date Mar 04, 2026
Sample Description Air Quality
Location SCG site 3 (GPS 47P 0734016, 1406627)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 32.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	04/03/26 - 05/03/26	ppm	-	1.0	2.3	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	04/03/26 - 05/03/26	ug/m3	-	2.0	68.2	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

Guideline :

NEB : Notification of the National Environmental Board., 2026 (B.E.2569) dated January 21, 2026

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 : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

Page 4 of 21

Sample Number 2610817-4
Sampled Date Mar 05, 2026
Sample Description Air Quality
Location SCG site 3 (GPS 47P 0734016, 1406627)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 32.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	05/03/26 - 06/03/26	ppm	-	1.0	3.5	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	05/03/26 - 06/03/26	ug/m3	-	2.0	65.5	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

Guideline :

NEB : Notification of the National Environmental Board., 2026 (B.E.2569) dated January 21, 2026

Sampled By : Santi Chaichana

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Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

Page 5 of 21

Sample Number 2610817-5
Sampled Date Mar 06, 2026
Sample Description Air Quality
Location SCG site 3 (GPS 47P 0734016, 1406627)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 31.1 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	06/03/26 - 07/03/26	ppm	-	1.0	2.4	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	06/03/26 - 07/03/26	ug/m3	-	2.0	47.7	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

Guideline :

NEB : Notification of the National Environmental Board., 2026 (B.E.2569) dated January 21, 2026

Sampled By : Santi Chaichana

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.

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

Page 6 of 21

Sample Number 2610817-6
Sampled Date Mar 07, 2026
Sample Description Air Quality
Location SCG site 3 (GPS 47P 0734016, 1406627)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 31.8 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	07/03/26 - 08/03/26	ppm	-	1.0	2.4	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	07/03/26 - 08/03/26	ug/m3	-	2.0	56.8	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

Guideline :

NEB : Notification of the National Environmental Board., 2026 (B.E.2569) dated January 21, 2026

Sampled By : Santi Chaichana

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Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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TESTING
No.0042

Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

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Sample Number 2610817-7
Sampled Date Mar 08, 2026
Sample Description Air Quality
Location SCG site 3 (GPS 47P 0734016, 1406627)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 31.6 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	08/03/26 - 09/03/26	ppm	-	1.0	2.5	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	08/03/26 - 09/03/26	ug/m3	-	2.0	42.0	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

Guideline :

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Sampled By : Santi Chaichana

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

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Sample Number : 2610817-8
Sampled Date : Mar 02, 2026
Sample Description : Air Quality
Location : วัดหนองแฟบ (GPS 47P 0729822, 1403304)
Date Analysis Commenced : Mar 10, 2026
Condition of Sample : Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure : 755 mmHg
Atmospheric Temperature : 32.1 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	02/03/26 - 03/03/26	ppm	-	1.0	2.3	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	02/03/26 - 03/03/26	ug/m3	-	2.0	33.9	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

Guideline :

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

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Sample Number 2610817-9
Sampled Date Mar 03, 2026
Sample Description Air Quality
Location รัตนลงนพ (GPS 47P 0729822, 1403304)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 31.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	03/03/26 - 04/03/26	ppm	-	1.0	2.3	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	03/03/26 - 04/03/26	ug/m3	-	2.0	50.2	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

Guideline :

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

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Sample Number 2610817-10
Sampled Date Mar 04, 2026
Sample Description Air Quality
Location วัดหนองพยอม (GPS 47P 0729822, 1403304)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 32.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	04/03/26 - 05/03/26	ppm	-	1.0	2.3	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	04/03/26 - 05/03/26	ug/m3	-	2.0	56.1	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

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Sample Number 2610817-11
Sampled Date Mar 05, 2026
Sample Description Air Quality
Location วัดหนองแฟบ (GPS 47P 0729822, 1403304)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 32.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	05/03/26 - 06/03/26	ppm	-	1.0	2.3	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	05/03/26 - 06/03/26	ug/m3	-	2.0	74.3	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

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Sample Number 2610817-12
Sampled Date Mar 06, 2026
Sample Description Air Quality
Location รัตนลงนพ (GPS 47P 0729822, 1403304)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 31.1 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	06/03/26 - 07/03/26	ppm	-	1.0	2.5	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	06/03/26 - 07/03/26	ug/m3	-	2.0	37.7	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

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Sample Number 2610817-13
Sampled Date Mar 07, 2026
Sample Description Air Quality
Location วัดหนองแฟบ (GPS 47P 0729822, 1403304)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 31.8 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	07/03/26 - 08/03/26	ppm	-	1.0	2.4	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	07/03/26 - 08/03/26	ug/m3	-	2.0	33.2	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

Guideline :

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

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Sample Number 2610817-14
Sampled Date Mar 08, 2026
Sample Description Air Quality
Location วัดหนองแฟบ (GPS 47P 0729822, 1403304)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 31.6 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	08/03/26 - 09/03/26	ppm	-	1.0	2.4	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	08/03/26 - 09/03/26	ug/m3	-	2.0	22.6	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

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Sample Number 2610817-15
Sampled Date Mar 02, 2026
Sample Description Air Quality
Location รร.บ้านมาบตาพุด (GPS 47P 0735360, 1406712)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 32.1 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	02/03/26 - 03/03/26	ppm	-	1.0	2.4	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	02/03/26 - 03/03/26	ug/m3	-	2.0	38.6	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

Guideline :

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

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Sample Number 2610817-16
Sampled Date Mar 03, 2026
Sample Description Air Quality
Location รร.บ้านมาบตาพุด (GPS 47P 0735360, 1406712)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 31.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	03/03/26 - 04/03/26	ppm	-	1.0	2.3	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	03/03/26 - 04/03/26	ug/m3	-	2.0	58.8	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

Guideline :

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

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Sample Number 2610817-17
Sampled Date Mar 04, 2026
Sample Description Air Quality
Location รร.บ้านมาบตาพุด (GPS 47P 0735360, 1406712)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 32.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	04/03/26 - 05/03/26	ppm	-	1.0	2.4	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	04/03/26 - 05/03/26	ug/m3	-	2.0	82.0	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

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Sample Number 2610817-18
Sampled Date Mar 05, 2026
Sample Description Air Quality
Location รร.บ้านมาบตาพุด (GPS 47P 0735360, 1406712)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 32.2 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	05/03/26 - 06/03/26	ppm	-	1.0	2.3	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	05/03/26 - 06/03/26	ug/m3	-	2.0	77.5	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

Guideline :

NEB : Notification of the National Environmental Board., 2026 (B.E.2569) dated January 21, 2026

Sampled By : Santi Chaichana

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.

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Life Sciences

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RIGHT SOLUTIONS RIGHT PARTNER



TESTING
No.0042

Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

Page 19 of 21

Sample Number 2610817-19
Sampled Date Mar 06, 2026
Sample Description Air Quality
Location รร.บ้านมาบตาพุด (GPS 47P 0735360, 1406712)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 31.1 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	06/03/26 - 07/03/26	ppm	-	1.0	2.5	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	06/03/26 - 07/03/26	ug/m3	-	2.0	64.9	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

Guideline :

NEB : Notification of the National Environmental Board., 2026 (B.E.2569) dated January 21, 2026

Sampled By : Santi Chaichana

Remark :

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

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026

Date Reported : Mar 17, 2026

Report Number : 3500724-1

Page 20 of 21

Sample Number 2610817-20
Sampled Date Mar 07, 2026
Sample Description Air Quality
Location รร.บ้านมาบตาพุด (GPS 47P 0735360, 1406712)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 31.8 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	07/03/26 - 08/03/26	ppm	-	1.0	2.5	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	07/03/26 - 08/03/26	ug/m3	-	2.0	40.2	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

Guideline :

NEB : Notification of the National Environmental Board., 2026 (B.E.2569) dated January 21, 2026

Sampled By : Santi Chaichana

Remark :

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

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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TESTING
No.0042

Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610817

Date Received : Mar 10, 2026
Date Reported : Mar 17, 2026
Report Number : 3500724-1

Page 21 of 21

Sample Number 2610817-21
Sampled Date Mar 08, 2026
Sample Description Air Quality
Location รร.บ้านมาบตาพุด (GPS 47P 0735360, 1406712)
Date Analysis Commenced Mar 10, 2026
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one 10-L air sampling bag
Barometric Pressure 755 mmHg
Atmospheric Temperature 31.6 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Hydrocarbon as Methane *	08/03/26 - 09/03/26	ppm	-	1.0	2.5	No Standard	Total Hydrocarbon Analyzer	-	Rayong
Total Suspended Particulate	08/03/26 - 09/03/26	ug/m3	-	2.0	41.4	200	United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008 (Include sampling)	NEB	Rayong

Guideline :

NEB : Notification of the National Environmental Board., 2026 (B.E.2569) dated January 21, 2026

Sampled By : Santi Chaichana

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.

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

Lot ID: 2610818

Date Received : Mar 10, 2026

Date Reported : Mar 16, 2026

Report Number : 3500721-1

P/O :

Project Name : Environmental Monitoring

Project Location : MMA Site 3

Page 1 of 2

Sample Number : 2610818-1 to 7
Parameter : Wind Speed / Wind Direction
Location : รร.บ้านนาบตาพุด (GPS 47P 0735360, 1406712)
Sampling Date : Mar 02 - Mar 09, 2026
Sampling by : Santi Chaichana

Time	Mar 02 - Mar 03, 2026			Mar 03 - Mar 04, 2026			Mar 04 - Mar 05, 2026			Mar 05 - Mar 06, 2026			Mar 06 - Mar 07, 2026			Mar 07 - Mar 08, 2026			Mar 08 - Mar 09, 2026		
	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	2.5	166.0	SSE	0.7	358.0	N	1.4	199.0	SSW	1.8	169.0	S	0.4	195.0	SSW	1.8	170.0	S	0.7	189.0	S
12:00 PM - 01:00 PM	3.8	170.0	S	0.9	229.0	SW	0.8	203.0	SSW	2.7	171.0	S	0.8	188.0	S	1.9	89.0	E	1.1	165.0	SSE
01:00 PM - 02:00 PM	1.8	163.0	SSE	1.7	178.0	S	0.9	173.0	S	1.3	144.0	SE	1.1	95.0	E	2.0	231.0	SW	1.6	170.0	S
02:00 PM - 03:00 PM	1.6	171.0	S	1.5	133.0	SE	0.9	156.0	SSE	1.3	154.0	SSE	2.2	222.0	SW	1.2	215.0	SW	1.1	139.0	SE
03:00 PM - 04:00 PM	0.8	168.0	SSE	0.7	160.0	SSE	0.9	183.0	S	0.9	208.0	SSW	2.2	188.0	S	1.4	202.0	SSW	3.4	193.0	SSW
04:00 PM - 05:00 PM	0.9	136.0	SE	0.0	-	-	0.7	184.0	S	0.4	38.0	NE	1.1	186.0	S	0.4	206.0	SSW	0.0	-	-
05:00 PM - 06:00 PM	0.4	142.0	SE	0.9	166.0	SSE	1.3	178.0	S	0.6	137.0	SE	0.0	-	-	0.0	-	-	0.2	-	-
06:00 PM - 07:00 PM	0.2	-	-	0.0	-	-	0.2	-	-	0.2	-	-	1.6	0.0	N	0.3	158.0	SSE	0.0	-	-
07:00 PM - 08:00 PM	0.8	142.0	SE	0.0	-	-	0.0	-	-	0.3	134.0	SE	0.1	-	-	0.0	-	-	0.0	-	-
08:00 PM - 09:00 PM	0.8	139.0	SE	0.6	178.0	S	0.1	-	-	0.1	-	-	1.7	319.0	NW	1.1	9.0	N	0.1	-	-
09:00 PM - 10:00 PM	0.0	-	-	0.0	-	-	1.0	113.0	ESE	0.2	-	-	0.5	336.0	NNW	0.2	-	-	0.0	-	-
10:00 PM - 11:00 PM	0.0	-	-	0.0	-	-	0.1	-	-	0.2	-	-	0.0	-	-	0.3	83.0	E	0.0	-	-
11:00 PM - 12:00 AM	0.0	-	-	0.8	175.0	S	0.7	125.0	SE	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
12:00 AM - 01:00 AM	0.4	169.0	S	1.1	153.0	SSE	0.5	142.0	SE	0.2	-	-	0.9	0.0	N	0.2	-	-	0.0	-	-
01:00 AM - 02:00 AM	0.1	-	-	0.1	-	-	1.5	183.0	S	0.6	359.0	N	0.9	234.0	SW	0.4	99.0	E	0.0	-	-
02:00 AM - 03:00 AM	0.0	-	-	0.0	-	-	0.3	174.0	S	0.2	-	-	0.8	333.0	NNW	0.0	-	-	0.6	340.0	NNW
03:00 AM - 04:00 AM	0.1	-	-	0.0	-	-	0.6	194.0	SSW	0.7	1.0	N	0.0	-	-	0.4	3.0	N	0.4	27.0	NNE
04:00 AM - 05:00 AM	0.4	6.0	N	0.0	-	-	0.0	-	-	0.0	-	-	0.7	0.0	N	0.4	0.0	N	0.7	355.0	N
05:00 AM - 06:00 AM	0.9	0.0	N	0.2	-	-	0.6	132.0	SE	0.4	359.0	N	0.7	0.0	N	0.0	-	-	0.0	-	-
06:00 AM - 07:00 AM	0.0	-	-	0.7	6.0	N	1.1	152.0	SSE	0.0	-	-	0.0	-	-	0.8	328.0	NNW	0.5	355.0	N
07:00 AM - 08:00 AM	1.5	188.0	S	0.8	359.0	N	0.2	-	-	2.7	4.0	N	0.6	7.0	N	2.5	344.0	NNW	0.9	9.0	N
08:00 AM - 09:00 AM	0.8	221.0	SW	0.7	162.0	SSE	2.8	161.0	SSE	1.0	352.0	N	2.5	359.0	N	1.8	1.0	N	1.1	313.0	NW
09:00 AM - 10:00 AM	0.9	166.0	SSE	0.1	-	-	0.8	176.0	S	0.9	200.0	SSW	1.0	140.0	SE	0.5	342.0	NNW	0.9	0.0	N
10:00 AM - 11:00 AM	0.3	165.0	SSE	1.5	177.0	S	0.9	203.0	SSW	1.4	201.0	SSW	1.3	135.0	SE	1.9	8.0	N	2.0	354.0	N

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.

271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location : MMA Site 3

Lot ID: 2610818

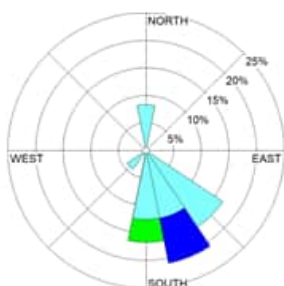
Date Received :Mar 10, 2026

Date Reported :Mar 16, 2026

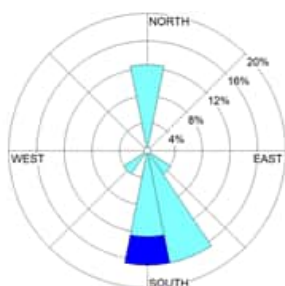
Report Number :3500721-1

Page 2 of 2

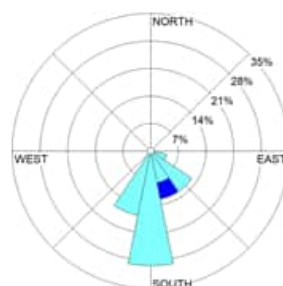
Wind Rose



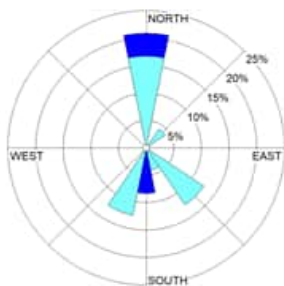
Date : Mar 02-03, 2026



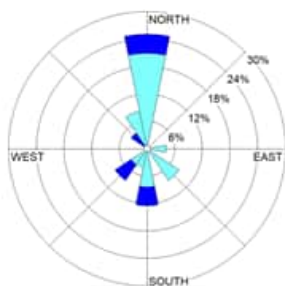
Date : Mar 03-04, 2026



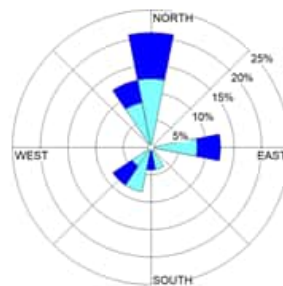
Date : Mar 04-05, 2026



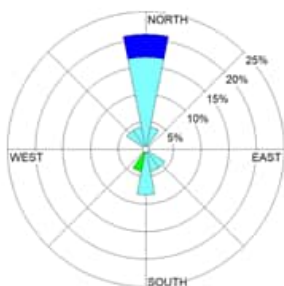
Date : Mar 05-06, 2026



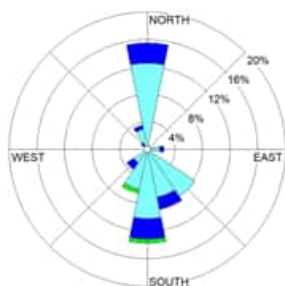
Date : Mar 06-07, 2026



Date : Mar 07-08, 2026



Date : Mar 08-09, 2026



Date : Mar 02-09, 2026

WS (m/s)	%
≥ 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	1.19
1.7-3.3	10.71
0.3-1.7	53.57
Calms	34.52

Location : รร.บ้านมาตาพุด (GPS 47P 0735360, 1406712)

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Approved by

Sarayuth Jitranont
Assistant General Manager

ภาคผนวก ค-2

ใบรับรองผลการตรวจวัดคุณภาพอากาศจากปล่องระบาย



Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

Lot ID: 2610833

Date Received : Mar 05, 2026

Date Reported : Mar 12, 2026

Report Number : 3500745-1

P/O : PMM-2025-336

Project Name : Environmental Monitoring

Project Location : MMA Site 3

Page 1 of 1

Sample Number : 2610833-1
Sample Description : Emission from Stationary Source
Location : ปล่อง Z-6210
Sampled Date : Mar 05, 2026

Stack Description

Ambient Temperature	32 °C	Diameter	1.75 m	Oxygen	5.12 %
Ambient Pressure	750.1 mmHg	Shape	Circle	Carbon dioxide	8.21 %
Type of Process	Combustion	Stack Temperature	134 °C	Gas Velocity	16.13 m/s
Type of Fuel	Waste Liquid	Moisture	18.62 %	Flow Rate	82093 Nm ³ /hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)	
				at Actual O ₂	At 7% O ₂
1	12:00 PM - 12:20 PM	5.15	8.18	13.64	12.04
2	12:21 PM - 12:41 PM	5.13	8.20	13.61	12.00
3	12:42 PM - 01:02 PM	5.09	8.24	13.94	12.26
Average (ppm)		5.12	8.21	13.73	12.10
Guideline ^{1/} (ppm)		-	-	-	42.4
Guideline ^{2/} (ppm)		-	-	-	200
Result (mg/Nm ³)		-	-	25.83	22.76
Emission Rate at Actual O ₂ (g/s)		-	-	0.589 *	
Guideline ^{1/} (g/s)		-	-	2.743	
Method		US EPA (2017) Method 3A		US EPA (2020) Method 7E	

Guideline : ^{1/}Environmental Impact Assessment Report of THAI MMA Co., Ltd.

^{2/}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)

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

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

Sampled By

Naratip T.

Naratip Thueakchaikam
RYG Field Services Scientist (1)
ทะเบียนเลขที่ ว-204-จ-0003

Approved by

Sarayuth Jittrantont

Sarayuth Jittrantont
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0003

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610829

Date Received : Mar 06, 2026
Date Reported : Mar 18, 2026
Report Number: 3500749-1

Page 1 of 2

Sample Number 2610829-1
Sampled Date Mar 05, 2026
Sample Description Emission from Stationary Source
Location ปล่อง Z-6210
Date Analysis Commenced Mar 07, 2026
Condition of Sample Extracted into one filter paper placed in plastic petri dish, one plastic bottle and four sorbent tubes, refrigerated

Stack Description

Ambient Pressure	750	mmHg	Diameter	1.75	m	Oxygen	5.1	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	8.2	%
Type of Process	Combustion		Stack Temperature	134	°C	Gas Velocity	16.2	m/s
Type of Fuel	Waste Liquid		Moisture	18.79	%	Flow Rate (Actual O2)	82045	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Guideline (1)	Guideline (2)	Method	Testing Location
					at 7 %O ₂	at 5.1 % O ₂				
Air Testing										
Total Suspended Particulate	12:00 PM - 12:54 PM	mg/m3	-	0.5	8.5	9.66	320	127.7	U.S. Environmental Protection Agency 40 CFR method 5, Appendix A, December 7, 2020 (Include sampling)	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-0029

Approved by

D. Changchon.

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

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610829

Date Received : Mar 06, 2026
Date Reported : Mar 18, 2026
Report Number: 3500749-1

Page 2 of 2

Sample Number 2610829-1
Sampled Date Mar 05, 2026
Sample Description Emission from Stationary Source
Location ปล่อง Z-6210
Date Analysis Commenced Mar 07, 2026
Condition of Sample Extracted into one filter paper placed in plastic petri dish, one plastic bottle and four sorbent tubes, refrigerated

Stack Description

Ambient Pressure	750	mmHg	Diameter	1.75	m	Oxygen	5.1	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	8.2	%
Type of Process	Combustion		Stack Temperature	134	°C	Gas Velocity	16.2	m/s
Type of Fuel	Waste Liquid		Moisture	18.79	%	Flow Rate (Actual O2)	82045	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
Air Testing									
Total Suspended Particulate *	12:00 PM - 12:54 PM	g/s	-	-	0.220	-	4.2	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.

Sampling By : Tinnakorn Kulchart ทะเบียนเลขที่ ว-323-จ-0062 , Jakkarin Manwicha ทะเบียนเลขที่ ว-204-จ-0096

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-0029

Approved by

D. Changchon

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

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610829

Date Received : Mar 06, 2026
Date Reported : Mar 24, 2026
Report Number: 3500749-2

Page 1 of 2

Sample Number 2610829-1
Sampled Date Mar 05, 2026
Sample Description Emission from Stationary Source
Location ปล่อง Z-6210
Date Analysis Commenced Mar 07, 2026
Condition of Sample Extracted into one filter paper placed in plastic petri dish, one plastic bottle and four sorbent tubes, refrigerated

Stack Description

Ambient Pressure	750	mmHg	Diameter	1.75	m	Oxygen	5.1	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	8.2	%
Type of Process	Combustion		Stack Temperature	134	°C	Gas Velocity	16.2	m/s
Type of Fuel	Waste Liquid		Moisture	18.79	%	Flow Rate (Actual O2)	82045	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Method	Testing Location
					at 7 %O ₂	at 5.1 % O ₂		
Air Testing								
Acrylic Acid	12:05 PM - 12:20 PM	ppm	-	1.0	<1.0	<1.0	Based on OSHA, ID 28	Bangkok
Methanol	12:05 PM - 12:20 PM	ppm	-	1.00	<1.00	<1.00	U.S. Environmental Protection Agency, EPA Method 18	Bangkok
Methyl Methacrylate	12:25 PM - 12:40 PM	ppm	-	0.3	<0.3	<0.3	U.S. Environmental Protection Agency, EPA Method 18	Bangkok
Toluene	12:25 PM - 12:40 PM	ppm	-	0.3	<0.3	<0.3	U.S. 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.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610829

Date Received : Mar 06, 2026
Date Reported : Mar 24, 2026
Report Number: 3500749-2

Page 2 of 2

Sample Number 2610829-1
Sampled Date Mar 05, 2026
Sample Description Emission from Stationary Source
Location ปล่อง Z-6210
Date Analysis Commenced Mar 07, 2026
Condition of Sample Extracted into one filter paper placed in plastic petri dish, one plastic bottle and four sorbent tubes, refrigerated

Stack Description

Ambient Pressure	750	mmHg	Diameter	1.75	m	Oxygen	5.1	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	8.2	%
Type of Process	Combustion		Stack Temperature	134	°C	Gas Velocity	16.2	m/s
Type of Fuel	Waste Liquid		Moisture	18.79	%	Flow Rate (Actual O2)	82045	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Method	Testing Location
Air Testing							
Acrylic Acid	12:05 PM - 12:20 PM	g/s	-	-	<0.02	Calculated	Bangkok
Methanol	12:05 PM - 12:20 PM	g/s	-	-	<0.03	Calculated	Bangkok
Methyl Methacrylate	12:25 PM - 12:40 PM	g/s	-	-	<0.03	Calculated	Bangkok
Toluene	12:25 PM - 12:40 PM	g/s	-	-	<0.03	Calculated	Bangkok

Sampling By : Tinnakorn Kulchart , 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.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

Lot ID: 2610835

Date Received : Mar 06, 2026

Date Reported : Mar 12, 2026

Report Number : 3500747-1

P/O : PMM-2025-336

Project Name : Environmental Monitoring

Project Location : MMA Site 3

Page 1 of 1

Sample Number : 2610835-1
Sample Description : Emission from Stationary Source
Location : ปล่อง 2Z-6210
Sampled Date : Mar 06, 2026

Stack Description

Ambient Temperature	33.1 °C	Diameter	1.56 m	Oxygen	5.22 %
Ambient Pressure	756.2 mmHg	Shape	Circle	Carbon dioxide	8.31 %
Type of Process	Combustion	Stack Temperature	129 °C	Gas Velocity	26.21 m/s
Type of Fuel	Waste Liquid	Moisture	24.16 %	Flow Rate	100764 Nm ³ /hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)	
				at Actual O ₂	At 7% O ₂
1	10:30 AM - 10:50 AM	5.25	8.29	10.66	9.47
2	10:51 AM - 11:11 AM	5.22	8.31	10.78	9.56
3	11:12 AM - 11:32 AM	5.19	8.34	10.93	9.67
Average (ppm)		5.22	8.31	10.79	9.57
Guideline ^{1/} (ppm)		-	-	-	19.9
Guideline ^{2/} (ppm)		-	-	-	200
Result (mg/Nm ³)		-	-	20.30	18.00
Emission Rate at Actual O ₂ (g/s)		-	-	0.568 *	
Guideline ^{1/} (g/s)		-	-	1.3500	
Method		US EPA (2017) Method 3A		US EPA (2020) Method 7E	

Guideline : ^{1/}Environmental Impact Assessment Report of THAI MMA Co., Ltd.

^{2/}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)

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

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

Sampled By

Naratip T.

Naratip Thueakchaikam
RYG Field Services Scientist (1)
ทะเบียนเลขที่ ว-204-จ-0003

Approved by

Sarayuth Jittrantont

Sarayuth Jittrantont
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0003

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610839

Date Received : Mar 06, 2026

Date Reported : Mar 18, 2026

Report Number: 3500751-1

Page 1 of 2

Sample Number 2610839-1
Sampled Date Mar 06, 2026
Sample Description Emission from Stationary Source
Location ปล่อง 2Z-6210
Date Analysis Commenced Mar 07, 2026
Condition of Sample Extracted into one filter paper placed in plastic petri dish, one plastic bottle and four sorbent tubes, refrigerated

Stack Description

Ambient Pressure	756	mmHg	Diameter	1.56	m	Oxygen	5.2	%
Ambient Temperature	33.1	°C	Shape	Circle		Carbon Dioxide	8.3	%
Type of Process	Combustion		Stack Temperature	129	°C	Gas Velocity	26.2	m/s
Type of Fuel	Waste Liquid		Moisture	24.15	%	Flow Rate (Actual O2)	100896	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Guideline (1)	Guideline (2)	Method	Testing Location
					at 7 %O ₂	at 5.2 % O ₂				

Air Testing

Total Suspended Particulate	10:30 AM - 11:18 AM	mg/m3	-	0.5	6.0	6.78	320	127.7	U.S. Environmental Protection Agency 40 CFR method 5, Appendix A, December 7, 2020 (Include sampling)	Rayong
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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-0029

Approved by

D. Chamon.

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

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610839
Date Received : Mar 06, 2026
Date Reported : Mar 18, 2026
Report Number: 3500751-1

Page 2 of 2

Sample Number 2610839-1
Sampled Date Mar 06, 2026
Sample Description Emission from Stationary Source
Location ปล่อง 2Z-6210
Date Analysis Commenced Mar 07, 2026
Condition of Sample Extracted into one filter paper placed in plastic petri dish, one plastic bottle and four sorbent tubes, refrigerated

Stack Description

Ambient Pressure	756	mmHg	Diameter	1.56	m	Oxygen	5.2	%
Ambient Temperature	33.1	°C	Shape	Circle		Carbon Dioxide	8.3	%
Type of Process	Combustion		Stack Temperature	129	°C	Gas Velocity	26.2	m/s
Type of Fuel	Waste Liquid		Moisture	24.15	%	Flow Rate (Actual O2)	100896	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
Air Testing									
Total Suspended Particulate *	10:30 AM - 11:18 AM	g/s	-	-	0.189	-	4.2	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.

Sampling By : Tinnakorn Kulchart ทะเบียนเลขที่ ว-323-จ-0062 , Jakkarin Manwicha ทะเบียนเลขที่ ว-204-จ-0096

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-0029

Approved by

D. Changchon

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

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610839

Date Received : Mar 06, 2026
Date Reported : Mar 24, 2026
Report Number: 3500751-2

Page 1 of 2

Sample Number 2610839-1
Sampled Date Mar 06, 2026
Sample Description Emission from Stationary Source
Location แปลง 2Z-6210
Date Analysis Commenced Mar 07, 2026
Condition of Sample Extracted into one filter paper placed in plastic petri dish, one plastic bottle and four sorbent tubes, refrigerated

Stack Description

Ambient Pressure	756	mmHg	Diameter	1.56	m	Oxygen	5.2	%
Ambient Temperature	33.1	°C	Shape	Circle		Carbon Dioxide	8.3	%
Type of Process	Combustion		Stack Temperature	129	°C	Gas Velocity	26.2	m/s
Type of Fuel	Waste Liquid		Moisture	24.15	%	Flow Rate (Actual O2)	100896	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Method	Testing Location
					at 7 %O ₂	at 5.2 % O ₂		
Air Testing								
Acrylic Acid	10:30 AM - 10:45 AM	ppm	-	1.0	<1.0	<1.0	Based on OSHA, ID 28	Bangkok
Methanol	10:30 AM - 10:45 AM	ppm	-	1.00	<1.00	<1.00	U.S. Environmental Protection Agency, EPA Method 18	Bangkok
Methyl Methacrylate	10:45 AM - 11:00 AM	ppm	-	0.3	<0.3	<0.3	U.S. Environmental Protection Agency, EPA Method 18	Bangkok
Toluene	10:45 AM - 11:00 AM	ppm	-	0.3	<0.3	<0.3	U.S. 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.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610839

Date Received : Mar 06, 2026
Date Reported : Mar 24, 2026
Report Number: 3500751-2

Page 2 of 2

Sample Number 2610839-1
Sampled Date Mar 06, 2026
Sample Description Emission from Stationary Source
Location ปล่อง 2Z-6210
Date Analysis Commenced Mar 07, 2026
Condition of Sample Extracted into one filter paper placed in plastic petri dish, one plastic bottle and four sorbent tubes, refrigerated

Stack Description

Ambient Pressure	756	mmHg	Diameter	1.56	m	Oxygen	5.2	%
Ambient Temperature	33.1	°C	Shape	Circle		Carbon Dioxide	8.3	%
Type of Process	Combustion		Stack Temperature	129	°C	Gas Velocity	26.2	m/s
Type of Fuel	Waste Liquid		Moisture	24.15	%	Flow Rate (Actual O2)	100896	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Method	Testing Location
Air Testing							
Acrylic Acid	10:30 AM - 10:45 AM	g/s	-	-	<0.03	Calculated	Bangkok
Methanol	10:30 AM - 10:45 AM	g/s	-	-	<0.04	Calculated	Bangkok
Methyl Methacrylate	10:45 AM - 11:00 AM	g/s	-	-	<0.03	Calculated	Bangkok
Toluene	10:45 AM - 11:00 AM	g/s	-	-	<0.03	Calculated	Bangkok

Sampling By : Tinnakorn Kulchart , 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

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610829

Date Received : Mar 06, 2026
Date Reported : Mar 18, 2026
Report Number: 3500749-1

Page 1 of 2

Sample Number 2610829-1
Sampled Date Mar 05, 2026
Sample Description Emission from Stationary Source
Location ปล่อง Z-6210
Date Analysis Commenced Mar 07, 2026
Condition of Sample Extracted into one filter paper placed in plastic petri dish, one plastic bottle and four sorbent tubes, refrigerated

Stack Description

Ambient Pressure	750	mmHg	Diameter	1.75	m	Oxygen	5.1	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	8.2	%
Type of Process	Combustion		Stack Temperature	134	°C	Gas Velocity	16.2	m/s
Type of Fuel	Waste Liquid		Moisture	18.79	%	Flow Rate (Actual O2)	82045	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Guideline (1)	Guideline (2)	Method	Testing Location
					at 7 %O ₂	at 5.1 % O ₂				
Air Testing										
Total Suspended Particulate	12:00 PM - 12:54 PM	mg/m3	-	0.5	8.5	9.66	320	127.7	U.S. Environmental Protection Agency 40 CFR method 5, Appendix A, December 7, 2020 (Include sampling)	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-0029

Approved by

D. Changchon.

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

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610829

Date Received : Mar 06, 2026
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Page 2 of 2

Sample Number 2610829-1
Sampled Date Mar 05, 2026
Sample Description Emission from Stationary Source
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Date Analysis Commenced Mar 07, 2026
Condition of Sample Extracted into one filter paper placed in plastic petri dish, one plastic bottle and four sorbent tubes, refrigerated

Stack Description

Ambient Pressure	750	mmHg	Diameter	1.75	m	Oxygen	5.1	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	8.2	%
Type of Process	Combustion		Stack Temperature	134	°C	Gas Velocity	16.2	m/s
Type of Fuel	Waste Liquid		Moisture	18.79	%	Flow Rate (Actual O2)	82045	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
Air Testing									
Total Suspended Particulate *	12:00 PM - 12:54 PM	g/s	-	-	0.220	-	4.2	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.

Sampling By : Tinnakorn Kulchart ทะเบียนเลขที่ ว-323-จ-0062 , Jakkarin Manwicha ทะเบียนเลขที่ ว-204-จ-0096

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. Changchon

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

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610829

Date Received : Mar 06, 2026
Date Reported : Mar 24, 2026
Report Number: 3500749-2

Page 1 of 2

Sample Number 2610829-1
Sampled Date Mar 05, 2026
Sample Description Emission from Stationary Source
Location ปล่อง Z-6210
Date Analysis Commenced Mar 07, 2026
Condition of Sample Extracted into one filter paper placed in plastic petri dish, one plastic bottle and four sorbent tubes, refrigerated

Stack Description

Ambient Pressure	750	mmHg	Diameter	1.75	m	Oxygen	5.1	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	8.2	%
Type of Process	Combustion		Stack Temperature	134	°C	Gas Velocity	16.2	m/s
Type of Fuel	Waste Liquid		Moisture	18.79	%	Flow Rate (Actual O2)	82045	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Method	Testing Location
					at 7 %O ₂	at 5.1 % O ₂		
Air Testing								
Acrylic Acid	12:05 PM - 12:20 PM	ppm	-	1.0	<1.0	<1.0	Based on OSHA, ID 28	Bangkok
Methanol	12:05 PM - 12:20 PM	ppm	-	1.00	<1.00	<1.00	U.S. Environmental Protection Agency, EPA Method 18	Bangkok
Methyl Methacrylate	12:25 PM - 12:40 PM	ppm	-	0.3	<0.3	<0.3	U.S. Environmental Protection Agency, EPA Method 18	Bangkok
Toluene	12:25 PM - 12:40 PM	ppm	-	0.3	<0.3	<0.3	U.S. 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.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610829

Date Received : Mar 06, 2026
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Page 2 of 2

Sample Number 2610829-1
Sampled Date Mar 05, 2026
Sample Description Emission from Stationary Source
Location ปล่อง Z-6210
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Condition of Sample Extracted into one filter paper placed in plastic petri dish, one plastic bottle and four sorbent tubes, refrigerated

Stack Description

Ambient Pressure	750	mmHg	Diameter	1.75	m	Oxygen	5.1	%
Ambient Temperature	32.0	°C	Shape	Circle		Carbon Dioxide	8.2	%
Type of Process	Combustion		Stack Temperature	134	°C	Gas Velocity	16.2	m/s
Type of Fuel	Waste Liquid		Moisture	18.79	%	Flow Rate (Actual O2)	82045	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Method	Testing Location
Air Testing							
Acrylic Acid	12:05 PM - 12:20 PM	g/s	-	-	<0.02	Calculated	Bangkok
Methanol	12:05 PM - 12:20 PM	g/s	-	-	<0.03	Calculated	Bangkok
Methyl Methacrylate	12:25 PM - 12:40 PM	g/s	-	-	<0.03	Calculated	Bangkok
Toluene	12:25 PM - 12:40 PM	g/s	-	-	<0.03	Calculated	Bangkok

Sampling By : Tinnakorn Kulchart , 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)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.



Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

Lot ID: 2610835
Date Received : Mar 06, 2026
Date Reported : Mar 12, 2026
Report Number : 3500747-1

P/O : PMM-2025-336

Project Name : Environmental Monitoring

Project Location : MMA Site 3

Page 1 of 1

Sample Number : 2610835-1
Sample Description : Emission from Stationary Source
Location : ปล่อง 2Z-6210
Sampled Date : Mar 06, 2026

Stack Description

Ambient Temperature	33.1 °C	Diameter	1.56 m	Oxygen	5.22 %
Ambient Pressure	756.2 mmHg	Shape	Circle	Carbon dioxide	8.31 %
Type of Process	Combustion	Stack Temperature	129 °C	Gas Velocity	26.21 m/s
Type of Fuel	Waste Liquid	Moisture	24.16 %	Flow Rate	100764 Nm ³ /hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)	
				at Actual O ₂	At 7% O ₂
1	10:30 AM - 10:50 AM	5.25	8.29	10.66	9.47
2	10:51 AM - 11:11 AM	5.22	8.31	10.78	9.56
3	11:12 AM - 11:32 AM	5.19	8.34	10.93	9.67
Average (ppm)		5.22	8.31	10.79	9.57
Guideline ^{1/} (ppm)		-	-	-	19.9
Guideline ^{2/} (ppm)		-	-	-	200
Result (mg/Nm ³)		-	-	20.30	18.00
Emission Rate at Actual O ₂ (g/s)		-	-	0.568 *	
Guideline ^{1/} (g/s)		-	-	1.3500	
Method		US EPA (2017) Method 3A		US EPA (2020) Method 7E	

Guideline : ^{1/}Environmental Impact Assessment Report of THAI MMA Co., Ltd.

^{2/}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)

Remark : - "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte (s) marked * is/ae not included in scope of Accreditation ISO/IEC 17025.

Sampled By

Naratip T.

Naratip Thueakchaikam
RYG Field Services Scientist (1)
ทะเบียนเลขที่ ว-204-จ-0003

Approved by

Sarayuth Jittranont

Sarayuth Jittranont
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0003

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

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610839

Date Received : Mar 06, 2026

Date Reported : Mar 18, 2026

Report Number: 3500751-1

Page 1 of 2

Sample Number 2610839-1
Sampled Date Mar 06, 2026
Sample Description Emission from Stationary Source
Location ปล่อง 2Z-6210
Date Analysis Commenced Mar 07, 2026
Condition of Sample Extracted into one filter paper placed in plastic petri dish, one plastic bottle and four sorbent tubes, refrigerated

Stack Description

Ambient Pressure	756	mmHg	Diameter	1.56	m	Oxygen	5.2	%
Ambient Temperature	33.1	°C	Shape	Circle		Carbon Dioxide	8.3	%
Type of Process	Combustion		Stack Temperature	129	°C	Gas Velocity	26.2	m/s
Type of Fuel	Waste Liquid		Moisture	24.15	%	Flow Rate (Actual O2)	100896	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Guideline (1)	Guideline (2)	Method	Testing Location
					at 7 % O ₂	at 5.2 % O ₂				

Air Testing

Total Suspended Particulate	10:30 AM - 11:18 AM	mg/m3	-	0.5	6.0	6.78	320	127.7	U.S. Environmental Protection Agency 40 CFR method 5, Appendix A, December 7, 2020 (Include sampling)	Rayong
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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-0029

Approved by

D. Chamon.

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

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610839
Date Received : Mar 06, 2026
Date Reported : Mar 18, 2026
Report Number: 3500751-1

Page 2 of 2

Sample Number 2610839-1
Sampled Date Mar 06, 2026
Sample Description Emission from Stationary Source
Location ปล่อง 2Z-6210
Date Analysis Commenced Mar 07, 2026
Condition of Sample Extracted into one filter paper placed in plastic petri dish, one plastic bottle and four sorbent tubes, refrigerated

Stack Description

Ambient Pressure	756	mmHg	Diameter	1.56	m	Oxygen	5.2	%
Ambient Temperature	33.1	°C	Shape	Circle		Carbon Dioxide	8.3	%
Type of Process	Combustion		Stack Temperature	129	°C	Gas Velocity	26.2	m/s
Type of Fuel	Waste Liquid		Moisture	24.15	%	Flow Rate (Actual O2)	100896	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
Air Testing									
Total Suspended Particulate *	10:30 AM - 11:18 AM	g/s	-	-	0.189	-	4.2	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.

Sampling By : Tinnakorn Kulchart ทะเบียนเลขที่ ว-323-จ-0062 , Jakkarin Manwicha ทะเบียนเลขที่ ว-204-จ-0096

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-0029

Approved by

D. Changchon

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

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610839

Date Received : Mar 06, 2026
Date Reported : Mar 24, 2026
Report Number: 3500751-2

Page 1 of 2

Sample Number 2610839-1
Sampled Date Mar 06, 2026
Sample Description Emission from Stationary Source
Location แปลง 2Z-6210
Date Analysis Commenced Mar 07, 2026
Condition of Sample Extracted into one filter paper placed in plastic petri dish, one plastic bottle and four sorbent tubes, refrigerated

Stack Description

Ambient Pressure	756	mmHg	Diameter	1.56	m	Oxygen	5.2	%
Ambient Temperature	33.1	°C	Shape	Circle		Carbon Dioxide	8.3	%
Type of Process	Combustion		Stack Temperature	129	°C	Gas Velocity	26.2	m/s
Type of Fuel	Waste Liquid		Moisture	24.15	%	Flow Rate (Actual O2)	100896	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result		Method	Testing Location
					at 7 %O ₂	at 5.2 % O ₂		
Air Testing								
Acrylic Acid	10:30 AM - 10:45 AM	ppm	-	1.0	<1.0	<1.0	Based on OSHA, ID 28	Bangkok
Methanol	10:30 AM - 10:45 AM	ppm	-	1.00	<1.00	<1.00	U.S. Environmental Protection Agency, EPA Method 18	Bangkok
Methyl Methacrylate	10:45 AM - 11:00 AM	ppm	-	0.3	<0.3	<0.3	U.S. Environmental Protection Agency, EPA Method 18	Bangkok
Toluene	10:45 AM - 11:00 AM	ppm	-	0.3	<0.3	<0.3	U.S. 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.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610839

Date Received : Mar 06, 2026
Date Reported : Mar 24, 2026
Report Number: 3500751-2

Page 2 of 2

Sample Number 2610839-1
Sampled Date Mar 06, 2026
Sample Description Emission from Stationary Source
Location ปล่อง 2Z-6210
Date Analysis Commenced Mar 07, 2026
Condition of Sample Extracted into one filter paper placed in plastic petri dish, one plastic bottle and four sorbent tubes, refrigerated

Stack Description

Ambient Pressure	756	mmHg	Diameter	1.56	m	Oxygen	5.2	%
Ambient Temperature	33.1	°C	Shape	Circle		Carbon Dioxide	8.3	%
Type of Process	Combustion		Stack Temperature	129	°C	Gas Velocity	26.2	m/s
Type of Fuel	Waste Liquid		Moisture	24.15	%	Flow Rate (Actual O2)	100896	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Method	Testing Location
Air Testing							
Acrylic Acid	10:30 AM - 10:45 AM	g/s	-	-	<0.03	Calculated	Bangkok
Methanol	10:30 AM - 10:45 AM	g/s	-	-	<0.04	Calculated	Bangkok
Methyl Methacrylate	10:45 AM - 11:00 AM	g/s	-	-	<0.03	Calculated	Bangkok
Toluene	10:45 AM - 11:00 AM	g/s	-	-	<0.03	Calculated	Bangkok

Sampling By : Tinnakorn Kulchart , 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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ภาคผนวก ค-3

ใบรับรองผลการตรวจวัดคุณภาพน้ำ



Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location : MMA Site 3

Lot ID: 25114668

Date Received : Jan 12, 2026

Date Reported : Jan 21, 2026

Report Number : 3491309-1

Page 1 of 1

Sample Number	25114668-1
Sampled Date	Jan 12, 2026 10:10 AM
Sample Description	Wastewater
Location	Equalization (T-9610)
Date Analysis Commenced	Jan 12, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	366	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	693	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	10.3	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	27.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1460	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	10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

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.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumma

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location : MMA Site 3

Lot ID: 25114668

Date Received : Jan 12, 2026

Date Reported : Jan 21, 2026

Report Number : 3491309-2

Page 1 of 1

Sample Number	25114668-1
Sampled Date	Jan 12, 2026 10:10 AM
Sample Description	Wastewater
Location	Equalization (T-9610)
Date Analysis Commenced	Jan 13, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	279	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O :
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 25114668

Date Received : Jan 12, 2026

Date Reported : Jan 21, 2026

Report Number : 3491310-1

Page 1 of 1

Sample Number	25114668-2
Sampled Date	Jan 12, 2026 10:05 AM
Sample Description	Wastewater
Location	Drainage before Check Basin (T-9640)
Date Analysis Commenced	Jan 12, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	31.8	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	138	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.6	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	27.3	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1540	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

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.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O :
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 25114668

Date Received : Jan 12, 2026

Date Reported : Jan 21, 2026

Report Number : 3491310-2

Page 1 of 1

Sample Number 25114668-2
Sampled Date Jan 12, 2026 10:05 AM
Sample Description Wastewater
Location Drainage before Check Basin (T-9640)
Date Analysis Commenced Jan 13, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	338	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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 : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location : MMA Site 3

TESTING
No.0042

Lot ID: 25114668

Date Received : Jan 12, 2026

Date Reported : Jan 21, 2026

Report Number : 3491311-1

Page 1 of 2

Sample Number	25114668-3
Sampled Date	Jan 12, 2026 10:00 AM
Sample Description	Wastewater
Location	Effluent from the Check Basin (T-9650)
Date Analysis Commenced	Jan 12, 2026
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	66	≤120	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	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	27.6	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1060	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.7	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

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

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chongchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location: MMA Site 3

TESTING
No.0042

Lot ID: 25114668

Date Received : Jan 12, 2026

Date Reported : Jan 21, 2026

Report Number : 3491311-1

Page 2 of 2

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.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchanas

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location: MMA Site 3

Lot ID: 25114668

Date Received : Jan 12, 2026

Date Reported : Jan 21, 2026

Report Number : 3491311-2

Page 1 of 1

Sample Number	25114668-3
Sampled Date	Jan 12, 2026 10:00 AM
Sample Description	Wastewater
Location	Effluent from the Check Basin (T-9650)
Date Analysis Commenced	Jan 13, 2026
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	206	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

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

Sampling By : Wanlop Hunchainaow

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Approved by

PhotchanaS

Photchana Seeda
Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266458

Date Received : Jan 23, 2026
Date Reported : Jan 30, 2026
Report Number : 3498759-1

Page 1 of 1

Sample Number	266458-1
Sampled Date	Jan 23, 2026 9:45 AM
Sample Description	Wastewater
Location	Equalization (2T-9610)
Date Analysis Commenced	Jan 23, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	760	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	1413	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.3	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2740	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	488	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Remark :

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266458

Date Received : Jan 23, 2026
Date Reported : Jan 30, 2026
Report Number : 3498759-2

Page 1 of 1

Sample Number	266458-1
Sampled Date	Jan 23, 2026 9:45 AM
Sample Description	Wastewater
Location	Equalization (2T-9610)
Date Analysis Commenced	Jan 29, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	676	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266458

Date Received : Jan 23, 2026
Date Reported : Jan 30, 2026
Report Number : 3498760-1

Page 1 of 1

Sample Number	266458-2
Sampled Date	Jan 23, 2026 9:35 AM
Sample Description	Wastewater
Location	Drainage before Check Basin (2T-9640)
Date Analysis Commenced	Jan 23, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	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	81	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.3	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.6	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	11	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266458

Date Received : Jan 23, 2026
Date Reported : Jan 30, 2026
Report Number : 3498760-2

Page 1 of 1

Sample Number : 266458-2
Sampled Date : Jan 23, 2026 9:35 AM
Sample Description : Wastewater
Location : Drainage before Check Basin (2T-9640)
Date Analysis Commenced : Jan 29, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	497	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266458

Date Received : Jan 23, 2026
Date Reported : Jan 30, 2026
Report Number : 3498761-1

Page 1 of 2

Sample Number	266458-3
Sampled Date	Jan 23, 2026 9:40 AM
Sample Description	Wastewater
Location	Effluent from the Check Basin (2T-9650)
Date Analysis Commenced	Jan 23, 2026
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	73	≤120	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	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.3	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1570	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	2.2	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	14	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

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

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266458

Date Received : Jan 23, 2026

Date Reported : Jan 30, 2026

Report Number : 3498761-1

TESTING
No.0042

Page 2 of 2

Remark :

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Technical Management

Photchanas

Photchana Seeda

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266458

Date Received : Jan 23, 2026
Date Reported : Jan 30, 2026
Report Number : 3498761-2

Page 1 of 1

Sample Number	266458-3
Sampled Date	Jan 23, 2026 9:40 AM
Sample Description	Wastewater
Location	Effluent from the Check Basin (2T-9650)
Date Analysis Commenced	Jan 29, 2026
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	444	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO ₄ (E)	Rayong

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

Sampling By : Wanlop Hunchainaow

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O :
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 25114671

Date Received : Jan 12, 2026
Date Reported : Jan 16, 2026
Report Number : 3478157-1

Page 1 of 2

Sample Number 25114671-1
Sampled Date Jan 12, 2026 10:15 AM
Sample Description Wastewater
Location บริเวณขาออกจากระบบน้ำหล่อเย็นก่อนเข้าระบบบำบัดน้ำเสียโรงงาน MMA1
Date Analysis Commenced Jan 12, 2026
Condition of Sample data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Residual Chlorine - as ClO ₂	mg/L	-	0.01	0.18	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Rayong

Sampling By : Wanlop Hunchainaow

Remark :

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Approved by

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Scientist (4)

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O :
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 25114671

Date Received : Jan 12, 2026

Date Reported : Jan 16, 2026

Report Number : 3478157-1

Page 2 of 2

Sample Number 25114671-2
Sampled Date Jan 12, 2026 9:50 AM
Sample Description Wastewater
Location บริเวณขาออกจากกระบวนน้ำหล่อเย็นก่อนเข้าระบบบำบัดน้ำเสียโรงงาน MMA2
Date Analysis Commenced Jan 12, 2026
Condition of Sample data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Residual Chlorine - as ClO ₂	mg/L	-	0.01	0.34	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Rayong

Sampling By : Wanlop Hunchainaow

Remark :

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location : MMA Site 3

Lot ID: 266463

Date Received : Jan 23, 2026

Date Reported : Jan 26, 2026

Report Number : 3494638-1

Page 1 of 1

Sample Number 266463-1
Sampled Date Jan 23, 2026 9:50 AM
Sample Description Wastewater
Location บริเวณขาออกจากกระบวนน้ำหล่อเย็นก่อนเข้าระบบบำบัดน้ำเสียโรงงาน MMA2
Date Analysis Commenced Jan 23, 2026
Condition of Sample data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Residual Chlorine - as ClO ₂	mg/L	-	0.01	0.30	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Rayong

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Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266003

Date Received : Feb 06, 2026
Date Reported : Feb 13, 2026
Report Number : 3507908-1

Page 1 of 1

Sample Number	266003-1
Sampled Date	Feb 06, 2026 9:58 AM
Sample Description	Wastewater
Location	Equalization (T-9610)
Date Analysis Commenced	Feb 06, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	31.1	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	551	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	9.7	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	31.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1056	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Remark :

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266003

Date Received : Feb 06, 2026

Date Reported : Feb 13, 2026

Report Number : 3507908-2

Page 1 of 1

Sample Number : 266003-1
Sampled Date : Feb 06, 2026 9:58 AM
Sample Description : Wastewater
Location : Equalization (T-9610)
Date Analysis Commenced : Feb 11, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	76.4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Photchana S

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266003

Date Received : Feb 06, 2026
Date Reported : Feb 13, 2026
Report Number : 3507909-1

Page 1 of 1

Sample Number : 266003-2
Sampled Date : Feb 06, 2026 9:53 AM
Sample Description : Wastewater
Location : Drainage before Check Basin (T-9640)
Date Analysis Commenced : Feb 06, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	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	138	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.9	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	956	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

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Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266003

Date Received : Feb 06, 2026

Date Reported : Feb 13, 2026

Report Number : 3507909-2

Page 1 of 1

Sample Number 266003-2
Sampled Date Feb 06, 2026 9:53 AM
Sample Description Wastewater
Location Drainage before Check Basin (T-9640)
Date Analysis Commenced Feb 11, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	87.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266003

Date Received : Feb 06, 2026

Date Reported : Feb 13, 2026

Report Number : 3507910-1

Page 1 of 2

Sample Number	266003-3
Sampled Date	Feb 06, 2026 9:48 AM
Sample Description	Wastewater
Location	Effluent from the Check Basin (T-9650)
Date Analysis Commenced	Feb 06, 2026
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	26	≤120	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	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.8	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	524	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	<1.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

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

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Technical Management

Photchana S

Photchana Seeda

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chongchon

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location: MMA Site 3

Lot ID: 266003

Date Received : Feb 06, 2026

Date Reported : Feb 13, 2026

Report Number : 3507910-1

TESTING
No.0042

Page 2 of 2

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Technical Management

Photchanas

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266003

Date Received : Feb 06, 2026
Date Reported : Feb 13, 2026
Report Number : 3507910-2

Page 1 of 1

Sample Number	266003-3						
Sampled Date	Feb 06, 2026 9:48 AM						
Sample Description	Wastewater						
Location	Effluent from the Check Basin (T-9650)						
Date Analysis Commenced	Feb 11, 2026						
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	131	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

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

Sampling By : Wanlop Hunchainaow

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Approved by

PhotchanaS

Photchana Seeda
Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266003

Date Received : Feb 06, 2026
Date Reported : Feb 13, 2026
Report Number : 3507911-1

Page 1 of 1

Sample Number	266003-4
Sampled Date	Feb 06, 2026 9:35 AM
Sample Description	Wastewater
Location	Equalization (2T-9610)
Date Analysis Commenced	Feb 06, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	401	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	2368	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1910	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	830	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266003

Date Received : Feb 06, 2026

Date Reported : Feb 13, 2026

Report Number : 3507911-2

Page 1 of 1

Sample Number : 266003-4
Sampled Date : Feb 06, 2026 9:35 AM
Sample Description : Wastewater
Location : Equalization (2T-9610)
Date Analysis Commenced : Feb 11, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	643	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266003

Date Received : Feb 06, 2026
Date Reported : Feb 13, 2026
Report Number : 3507912-1

Page 1 of 1

Sample Number : 266003-5
Sampled Date : Feb 06, 2026 9:25 AM
Sample Description : Wastewater
Location : Drainage before Check Basin (2T-9640)
Date Analysis Commenced : Feb 06, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	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	48	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	31.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1390	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	18	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

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Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266003

Date Received : Feb 06, 2026
Date Reported : Feb 13, 2026
Report Number : 3507912-2

Page 1 of 1

Sample Number : 266003-5
Sampled Date : Feb 06, 2026 9:25 AM
Sample Description : Wastewater
Location : Drainage before Check Basin (2T-9640)
Date Analysis Commenced : Feb 11, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	422	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Photchana S

Photchana Seeda
Scientist (4)

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266003

Date Received : Feb 06, 2026

Date Reported : Feb 13, 2026

Report Number : 3507913-1

Page 1 of 2

Sample Number	266003-6
Sampled Date	Feb 06, 2026 9:30 AM
Sample Description	Wastewater
Location	Effluent from the Check Basin (2T-9650)
Date Analysis Commenced	Feb 06, 2026
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	34	≤120	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	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	31.0	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1380	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.2	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	11	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

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

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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TESTING
No.0042

Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-2025-336

Project Name : Environmental Monitoring

Project Location : MMA Site 3

Lot ID: 266003

Date Received : Feb 06, 2026

Date Reported : Feb 13, 2026

Report Number : 3507913-1

Page 2 of 2

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchanas

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 266003

Date Received : Feb 06, 2026
Date Reported : Feb 13, 2026
Report Number : 3507913-2

Page 1 of 1

Sample Number	266003-6						
Sampled Date	Feb 06, 2026 9:30 AM						
Sample Description	Wastewater						
Location	Effluent from the Check Basin (2T-9650)						
Date Analysis Commenced	Feb 11, 2026						
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	367	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

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

Sampling By : Wanlop Hunchainaow

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Approved by

PhotchanaS

Photchana Seeda
Scientist (4)

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Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265995

Date Received : Feb 06, 2026
Date Reported : Feb 10, 2026
Report Number : 3491681-1

Page 1 of 2

Sample Number : 265995-1
Sampled Date : Feb 06, 2026 10:00 AM
Sample Description : Wastewater
Location : บริเวณขาออกจากกระบวนน้ำหล่อเย็นก่อนเข้าระบบบำบัดน้ำเสียโรงงาน MMA1
Date Analysis Commenced : Feb 06, 2026
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Residual Chlorine - as ClO ₂	mg/L	-	0.01	0.16	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Rayong

Sampling By : Wanlop Hunchainaow

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Analysis / Test Report

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265995

Date Received : Feb 06, 2026
Date Reported : Feb 10, 2026
Report Number : 3491681-1

Page 2 of 2

Sample Number : 265995-2
Sampled Date : Feb 06, 2026 9:37 AM
Sample Description : Wastewater
Location : บริเวณขาออกจากระบบน้ำหล่อเย็นก่อนเข้าระบบบำบัดน้ำเสียโรงงาน MMA2
Date Analysis Commenced : Feb 06, 2026
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Residual Chlorine - as ClO ₂	mg/L	-	0.01	0.31	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Rayong

Sampling By : Wanlop Hunchainaow

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TESTING
No.0042

Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610850

Date Received : Mar 11, 2026

Date Reported : Mar 18, 2026

Report Number : 3530647-1

Page 1 of 1

Sample Number : 2610850-1
Sampled Date : Mar 11, 2026 10:35 AM
Sample Description : Wastewater
Location : Equalization (T-9610)
Date Analysis Commenced : Mar 11, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	45.0	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	496	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	9.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	40.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2030	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	29	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610850

Date Received : Mar 11, 2026

Date Reported : Mar 18, 2026

Report Number : 3530647-2

Page 1 of 1

Sample Number : 2610850-1
Sampled Date : Mar 11, 2026 10:35 AM
Sample Description : Wastewater
Location : Equalization (T-9610)
Date Analysis Commenced : Mar 11, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	514	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610850

Date Received : Mar 11, 2026

Date Reported : Mar 18, 2026

Report Number : 3530648-1

Page 1 of 1

Sample Number : 2610850-2
Sampled Date : Mar 11, 2026 10:30 AM
Sample Description : Wastewater
Location : Drainage before Check Basin (T-9640)
Date Analysis Commenced : Mar 11, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	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	120	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.6	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.8	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2060	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	2.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	<5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

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Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumma

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610850

Date Received : Mar 11, 2026

Date Reported : Mar 18, 2026

Report Number : 3530648-2

Page 1 of 1

Sample Number 2610850-2
Sampled Date Mar 11, 2026 10:30 AM
Sample Description Wastewater
Location Drainage before Check Basin (T-9640)
Date Analysis Commenced Mar 11, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	704	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610850
Date Received : Mar 11, 2026
Date Reported : Mar 18, 2026
Report Number : 3530649-1

Page 1 of 2

Sample Number	2610850-3
Sampled Date	Mar 11, 2026 10:25 AM
Sample Description	Wastewater
Location	Effluent from the Check Basin (T-9650)
Date Analysis Commenced	Mar 11, 2026
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	50	≤120	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	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	32.8	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1330	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.6	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

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

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610850

Date Received : Mar 11, 2026

Date Reported : Mar 18, 2026

Report Number : 3530649-1

TESTING
No.0042

Page 2 of 2

Remark :

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchanas

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Johnson

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Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location: MMA Site 3

Lot ID: 2610850

Date Received : Mar 11, 2026

Date Reported : Mar 18, 2026

Report Number : 3530649-2

Page 1 of 1

Sample Number	2610850-3						
Sampled Date	Mar 11, 2026 10:25 AM						
Sample Description	Wastewater						
Location	Effluent from the Check Basin (T-9650)						
Date Analysis Commenced	Mar 11, 2026						
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	369	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

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

Sampling By : Wanlop Hunchainaow

Remark :

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

Approved by

PhotchanaS

Photchana Seeda
Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610850

Date Received : Mar 11, 2026

Date Reported : Mar 18, 2026

Report Number : 3530650-1

Page 1 of 1

Sample Number	2610850-4
Sampled Date	Mar 11, 2026 10:05 AM
Sample Description	Wastewater
Location	Equalization (2T-9610)
Date Analysis Commenced	Mar 11, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	479	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	1233	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	9.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	35.6	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2720	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	49	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Remark :

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumma

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610850

Date Received : Mar 11, 2026

Date Reported : Mar 18, 2026

Report Number : 3530650-2

Page 1 of 1

Sample Number : 2610850-4
Sampled Date : Mar 11, 2026 10:05 AM
Sample Description : Wastewater
Location : Equalization (2T-9610)
Date Analysis Commenced : Mar 11, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	622	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610850

Date Received : Mar 11, 2026

Date Reported : Mar 18, 2026

Report Number : 3530651-1

Page 1 of 1

Sample Number 2610850-5
Sampled Date Mar 11, 2026 9:55 AM
Sample Description Wastewater
Location Drainage before Check Basin (2T-9640)
Date Analysis Commenced Mar 11, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	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	75	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.6	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Remark :

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610850

Date Received : Mar 11, 2026

Date Reported : Mar 18, 2026

Report Number : 3530651-2

Page 1 of 1

Sample Number 2610850-5
Sampled Date Mar 11, 2026 9:55 AM
Sample Description Wastewater
Location Drainage before Check Basin (2T-9640)
Date Analysis Commenced Mar 11, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	377	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610850

Date Received : Mar 11, 2026

Date Reported : Mar 18, 2026

Report Number : 3530652-1

Page 1 of 2

Sample Number	2610850-6
Sampled Date	Mar 11, 2026 10:00 AM
Sample Description	Wastewater
Location	Effluent from the Check Basin (2T-9650)
Date Analysis Commenced	Mar 11, 2026
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	71	≤120	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	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	32.8	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1330	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	2.1	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	8	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

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

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chongchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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TESTING
No.0042

Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-2025-336

Project Name : Environmental Monitoring

Project Location: MMA Site 3

Lot ID: 2610850

Date Received : Mar 11, 2026

Date Reported : Mar 18, 2026

Report Number : 3530652-1

Page 2 of 2

Remark :

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchanas

Photchana Seeda

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Johnson

Dej Changchon

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location: MMA Site 3

Lot ID: 2610850

Date Received : Mar 11, 2026

Date Reported : Mar 18, 2026

Report Number : 3530652-2

Page 1 of 1

Sample Number	2610850-6
Sampled Date	Mar 11, 2026 10:00 AM
Sample Description	Wastewater
Location	Effluent from the Check Basin (2T-9650)
Date Analysis Commenced	Mar 11, 2026
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	325	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

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

Sampling By : Wanlop Hunchainaow

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Approved by

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Scientist (4)

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610849

Date Received : Mar 11, 2026

Date Reported : Mar 14, 2026

Report Number : 3500761-1

Page 1 of 2

Sample Number : 2610849-1
Sampled Date : Mar 11, 2026 10:38 AM
Sample Description : Wastewater
Location : บริเวณขาออกจากระบบน้ำหล่อเย็นก่อนเข้าระบบบำบัดน้ำเสียโรงงาน MMA1
Date Analysis Commenced : Mar 11, 2026
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Residual Chlorine - as ClO ₂	mg/L	-	0.01	0.13	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Rayong

Sampling By : Wanlop Hunchainaow

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Scientist (4)

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610849

Date Received : Mar 11, 2026

Date Reported : Mar 14, 2026

Report Number : 3500761-1

Page 2 of 2

Sample Number : 2610849-2
Sampled Date : Mar 11, 2026 10:10 AM
Sample Description : Wastewater
Location : บริเวณขาออกจากระบบน้ำหล่อเย็นก่อนเข้าระบบบำบัดน้ำเสียโรงงาน MMA2
Date Analysis Commenced : Mar 11, 2026
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Residual Chlorine - as ClO ₂	mg/L	-	0.01	0.13	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Rayong

Sampling By : Wanlop Hunchainaow

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2623631

Date Received : Apr 10, 2026

Date Reported : Apr 21, 2026

Report Number : 3553248-1

Page 1 of 1

Sample Number	2623631-1
Sampled Date	Apr 10, 2026 10:43 AM
Sample Description	Wastewater
Location	Equalization (T-9610)
Date Analysis Commenced	Apr 10, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	240	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	1299	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C *		-	-	11.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.6	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1520	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	16	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Remark :

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumma

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2623631

Date Received : Apr 10, 2026

Date Reported : Apr 21, 2026

Report Number : 3553248-2

Page 1 of 1

Sample Number : 2623631-1
Sampled Date : Apr 10, 2026 10:43 AM
Sample Description : Wastewater
Location : Equalization (T-9610)
Date Analysis Commenced : Apr 10, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	93.7	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

Remark :

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2623631

Date Received : Apr 10, 2026
Date Reported : Apr 21, 2026
Report Number : 3553249-1

Page 1 of 1

Sample Number 2623631-2
Sampled Date Apr 10, 2026 10:40 AM
Sample Description Wastewater
Location Drainage before Check Basin (T-9640)
Date Analysis Commenced Apr 10, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	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	165	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.6	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.6	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	980	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	<1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	<5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Remark :

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2623631

Date Received : Apr 10, 2026

Date Reported : Apr 21, 2026

Report Number : 3553249-2

Page 1 of 1

Sample Number : 2623631-2
Sampled Date : Apr 10, 2026 10:40 AM
Sample Description : Wastewater
Location : Drainage before Check Basin (T-9640)
Date Analysis Commenced : Apr 10, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	99.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

Remark :

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Approved by

Photchana S

Photchana Seeda

Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2623631

Date Received : Apr 10, 2026

Date Reported : Apr 21, 2026

Report Number : 3553250-1

Page 1 of 2

Sample Number	2623631-3
Sampled Date	Apr 10, 2026 10:34 AM
Sample Description	Wastewater
Location	Effluent from the Check Basin (T-9650)
Date Analysis Commenced	Apr 10, 2026
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	28	≤120	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	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	32.2	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	518	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	<1.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

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

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chongchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2623631

Date Received : Apr 10, 2026

Date Reported : Apr 21, 2026

Report Number : 3553250-1

TESTING
No.0042

Page 2 of 2

Remark :

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchanas

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2623631

Date Received : Apr 10, 2026

Date Reported : Apr 21, 2026

Report Number : 3553250-2

Page 1 of 1

Sample Number	2623631-3						
Sampled Date	Apr 10, 2026 10:34 AM						
Sample Description	Wastewater						
Location	Effluent from the Check Basin (T-9650)						
Date Analysis Commenced	Apr 10, 2026						
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	70.3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

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

Sampling By : Wanlop Hunchainaow

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Approved by

PhotchanaS

Photchana Seeda
Scientist (4)

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TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2623631

Date Received : Apr 10, 2026
Date Reported : Apr 21, 2026
Report Number : 3553251-1

Page 1 of 1

Sample Number	2623631-4
Sampled Date	Apr 10, 2026 10:06 AM
Sample Description	Wastewater
Location	Equalization (2T-9610)
Date Analysis Commenced	Apr 10, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	402	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	1870	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	9.4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	36.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2460	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	80	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

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Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2623631

Date Received : Apr 10, 2026

Date Reported : Apr 21, 2026

Report Number : 3553251-2

Page 1 of 1

Sample Number 2623631-4
Sampled Date Apr 10, 2026 10:06 AM
Sample Description Wastewater
Location Equalization (2T-9610)
Date Analysis Commenced Apr 10, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	27.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Photchana Seeda

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2623631

Date Received : Apr 10, 2026
Date Reported : Apr 21, 2026
Report Number : 3553252-1

Page 1 of 1

Sample Number : 2623631-5
Sampled Date : Apr 10, 2026 9:55 AM
Sample Description : Wastewater
Location : Drainage before Check Basin (2T-9640)
Date Analysis Commenced : Apr 10, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	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	65	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	34.4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1510	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.3	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	7	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

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Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2623631

Date Received : Apr 10, 2026

Date Reported : Apr 21, 2026

Report Number : 3553252-2

Page 1 of 1

Sample Number : 2623631-5
Sampled Date : Apr 10, 2026 9:55 AM
Sample Description : Wastewater
Location : Drainage before Check Basin (2T-9640)
Date Analysis Commenced : Apr 10, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	447	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2623631
Date Received : Apr 10, 2026
Date Reported : Apr 21, 2026
Report Number : 3553253-1

Page 1 of 2

Sample Number	2623631-6
Sampled Date	Apr 10, 2026 10:00 AM
Sample Description	Wastewater
Location	Effluent from the Check Basin (2T-9650)
Date Analysis Commenced	Apr 10, 2026
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	58	≤120	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	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.9	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1380	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.8	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	6	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

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

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chongchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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TESTING
No.0042

Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-2025-336

Project Name : Environmental Monitoring

Project Location: MMA Site 3

Lot ID: 2623631

Date Received : Apr 10, 2026

Date Reported : Apr 21, 2026

Report Number : 3553253-1

Page 2 of 2

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchanas

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2623631

Date Received : Apr 10, 2026

Date Reported : Apr 21, 2026

Report Number : 3553253-2

Page 1 of 1

Sample Number	2623631-6						
Sampled Date	Apr 10, 2026 10:00 AM						
Sample Description	Wastewater						
Location	Effluent from the Check Basin (2T-9650)						
Date Analysis Commenced	Apr 10, 2026						
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	436	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

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

Sampling By : Wanlop Hunchainaow

Remark :

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

Approved by

PhotchanaS

Photchana Seeda
Scientist (4)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2623634

Date Received : Apr 10, 2026
Date Reported : Apr 17, 2026
Report Number : 3529237-1

Page 1 of 2

Sample Number : 2623634-1
Sampled Date : Apr 10, 2026 10:46 AM
Sample Description : Wastewater
Location : บริเวณขาออกจากระบบน้ำหล่อเย็นก่อนเข้าระบบบำบัดน้ำเสียโรงงาน MMA1
Date Analysis Commenced : Apr 11, 2026
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Residual Chlorine - as ClO ₂	mg/L	-	0.01	0.19	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Rayong

Sampling By : Wanlop Hunchainaow

Remark :

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Scientist (4)

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2623634

Date Received : Apr 10, 2026

Date Reported : Apr 17, 2026

Report Number : 3529237-1

Page 2 of 2

Sample Number : 2623634-2
Sampled Date : Apr 10, 2026 10:08 AM
Sample Description : Wastewater
Location : บริเวณขาออกจากระบบน้ำหล่อเย็นก่อนเข้าระบบบำบัดน้ำเสียโรงงาน MMA2
Date Analysis Commenced : Apr 11, 2026
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Residual Chlorine - as ClO ₂	mg/L	-	0.01	1.13	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Rayong

Sampling By : Wanlop Hunchainaow

Remark :

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2633640

Date Received : May 08, 2026

Date Reported : May 15, 2026

Report Number : 3571635-1

Page 1 of 1

Sample Number	2633640-1
Sampled Date	May 08, 2026 11:13 AM
Sample Description	Wastewater
Location	Equalization (T-9610)
Date Analysis Commenced	May 08, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	248	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	1111	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	35.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	51	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Remark :

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2633640

Date Received : May 08, 2026
Date Reported : May 15, 2026
Report Number : 3571635-2

Page 1 of 1

Sample Number 2633640-1
Sampled Date May 08, 2026 11:13 AM
Sample Description Wastewater
Location Equalization (T-9610)
Date Analysis Commenced May 11, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	435	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2633640

Date Received : May 08, 2026
Date Reported : May 15, 2026
Report Number : 3571636-1

Page 1 of 1

Sample Number 2633640-2
Sampled Date May 08, 2026 11:08 AM
Sample Description Wastewater
Location Drainage before Check Basin (T-9640)
Date Analysis Commenced May 08, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	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	85	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.9	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	<1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	<5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2633640

Date Received : May 08, 2026

Date Reported : May 15, 2026

Report Number : 3571636-2

Page 1 of 1

Sample Number : 2633640-2
Sampled Date : May 08, 2026 11:08 AM
Sample Description : Wastewater
Location : Drainage before Check Basin (T-9640)
Date Analysis Commenced : May 11, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	508	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2633640
Date Received : May 08, 2026
Date Reported : May 15, 2026
Report Number : 3571637-1

Page 1 of 2

Sample Number	2633640-3
Sampled Date	May 08, 2026 11:05 AM
Sample Description	Wastewater
Location	Effluent from the Check Basin (T-9650)
Date Analysis Commenced	May 08, 2026
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	48	≤120	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	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	34.7	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1200	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

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

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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TESTING
No.0042

Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-2025-336

Project Name : Environmental Monitoring

Project Location: MMA Site 3

Lot ID: 2633640

Date Received : May 08, 2026

Date Reported : May 15, 2026

Report Number : 3571637-1

Page 2 of 2

Remark :

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchanas

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location: MMA Site 3

Lot ID: 2633640

Date Received : May 08, 2026

Date Reported : May 15, 2026

Report Number : 3571637-2

Page 1 of 1

Sample Number	2633640-3						
Sampled Date	May 08, 2026 11:05 AM						
Sample Description	Wastewater						
Location	Effluent from the Check Basin (T-9650)						
Date Analysis Commenced	May 11, 2026						
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	415	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

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

Sampling By : Wanlop Hunchainaow

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2633640

Date Received : May 08, 2026

Date Reported : May 15, 2026

Report Number : 3571638-1

Page 1 of 1

Sample Number	2633640-4
Sampled Date	May 08, 2026 10:27 AM
Sample Description	Wastewater
Location	Equalization (2T-9610)
Date Analysis Commenced	May 08, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	438	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	1739	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	35.7	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2650	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	692	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2633640

Date Received : May 08, 2026

Date Reported : May 15, 2026

Report Number : 3571638-2

Page 1 of 1

Sample Number : 2633640-4
Sampled Date : May 08, 2026 10:27 AM
Sample Description : Wastewater
Location : Equalization (2T-9610)
Date Analysis Commenced : May 11, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	784	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Photchana Seeda

Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2633640

Date Received : May 08, 2026

Date Reported : May 15, 2026

Report Number : 3571639-1

Page 1 of 1

Sample Number 2633640-5
Sampled Date May 08, 2026 10:18 AM
Sample Description Wastewater
Location Drainage before Check Basin (2T-9640)
Date Analysis Commenced May 08, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	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	83	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1220	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	26	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2633640

Date Received : May 08, 2026

Date Reported : May 15, 2026

Report Number : 3571639-2

Page 1 of 1

Sample Number : 2633640-5
Sampled Date : May 08, 2026 10:18 AM
Sample Description : Wastewater
Location : Drainage before Check Basin (2T-9640)
Date Analysis Commenced : May 11, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	402	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2633640
Date Received : May 08, 2026
Date Reported : May 15, 2026
Report Number : 3571640-1

Page 1 of 2

Sample Number	2633640-6
Sampled Date	May 08, 2026 10:22 AM
Sample Description	Wastewater
Location	Effluent from the Check Basin (2T-9650)
Date Analysis Commenced	May 08, 2026
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	63	≤120	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	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	32.9	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1070	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	11	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

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

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chongchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location: MMA Site 3

Lot ID: 2633640

Date Received : May 08, 2026

Date Reported : May 15, 2026

Report Number : 3571640-1

TESTING
No.0042

Page 2 of 2

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchanas

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location: MMA Site 3

Lot ID: 2633640

Date Received : May 08, 2026

Date Reported : May 15, 2026

Report Number : 3571640-2

Page 1 of 1

Sample Number	2633640-6
Sampled Date	May 08, 2026 10:22 AM
Sample Description	Wastewater
Location	Effluent from the Check Basin (2T-9650)
Date Analysis Commenced	May 11, 2026
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	325	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

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

Sampling By : Wanlop Hunchainaow

Remark :

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Approved by

PhotchanaS

Photchana Seeda
Scientist (4)

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2633639

Date Received : May 08, 2026
Date Reported : May 12, 2026
Report Number : 3554944-1

Page 1 of 2

Sample Number : 2633639-1
Sampled Date : May 08, 2026 11:17 AM
Sample Description : Wastewater
Location : บริเวณขาออกจากระบบน้ำหล่อเย็นก่อนเข้าระบบบำบัดน้ำเสียโรงงาน MMA1
Date Analysis Commenced : May 08, 2026
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Residual Chlorine - as ClO ₂	mg/L	-	0.01	0.12	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Rayong

Sampling By : Wanlop Hunchainaow

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Scientist (4)

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Analysis / Test Report

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2633639

Date Received : May 08, 2026
Date Reported : May 12, 2026
Report Number : 3554944-1

Page 2 of 2

Sample Number : 2633639-2
Sampled Date : May 08, 2026 10:30 AM
Sample Description : Wastewater
Location : บริเวณขาออกจากระบบน้ำหล่อเย็นก่อนเข้าระบบบำบัดน้ำเสียโรงงาน MMA2
Date Analysis Commenced : May 08, 2026
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Residual Chlorine - as ClO ₂	mg/L	-	0.01	0.45	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Rayong

Sampling By : Wanlop Hunchainaow

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2643409

Date Received : Jun 12, 2026
Date Reported : Jun 19, 2026
Report Number : 3601944-1

Page 1 of 1

Sample Number	2643409-1
Sampled Date	Jun 12, 2026 10:26 AM
Sample Description	Wastewater
Location	Equalization (T-9610)
Date Analysis Commenced	Jun 12, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	112	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	1360	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C *		-	-	10.7	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.9	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2440	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	23	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

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Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2643409

Date Received : Jun 12, 2026

Date Reported : Jun 19, 2026

Report Number : 3601944-2

Page 1 of 1

Sample Number : 2643409-1
Sampled Date : Jun 12, 2026 10:26 AM
Sample Description : Wastewater
Location : Equalization (T-9610)
Date Analysis Commenced : Jun 13, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	614	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2643409

Date Received : Jun 12, 2026
Date Reported : Jun 19, 2026
Report Number : 3601945-1

Page 1 of 1

Sample Number 2643409-2
Sampled Date Jun 12, 2026 10:22 AM
Sample Description Wastewater
Location Drainage before Check Basin (T-9640)
Date Analysis Commenced Jun 12, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	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	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	<1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	<5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

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Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2643409

Date Received : Jun 12, 2026

Date Reported : Jun 19, 2026

Report Number : 3601945-2

Page 1 of 1

Sample Number 2643409-2
Sampled Date Jun 12, 2026 10:22 AM
Sample Description Wastewater
Location Drainage before Check Basin (T-9640)
Date Analysis Commenced Jun 13, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	440	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

Remark :

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Scientist (4)

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2643409
Date Received : Jun 12, 2026
Date Reported : Jun 19, 2026
Report Number : 3601946-1

Page 1 of 2

Sample Number	2643409-3
Sampled Date	Jun 12, 2026 10:19 AM
Sample Description	Wastewater
Location	Effluent from the Check Basin (T-9650)
Date Analysis Commenced	Jun 12, 2026
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	36	≤120	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	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.5	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1070	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	2.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

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

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chongchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

TESTING
No.0042
Lot ID: 2643409
Date Received : Jun 12, 2026
Date Reported : Jun 19, 2026
Report Number : 3601946-1

Page 2 of 2

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.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchanas

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location: MMA Site 3

Lot ID: 2643409

Date Received : Jun 12, 2026

Date Reported : Jun 19, 2026

Report Number : 3601946-2

Page 1 of 1

Sample Number	2643409-3						
Sampled Date	Jun 12, 2026 10:19 AM						
Sample Description	Wastewater						
Location	Effluent from the Check Basin (T-9650)						
Date Analysis Commenced	Jun 13, 2026						
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	275	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

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

Sampling By : Wanlop Hunchainaow

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Approved by

PhotchanaS

Photchana Seeda
Scientist (4)

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TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2643409

Date Received : Jun 12, 2026
Date Reported : Jun 19, 2026
Report Number : 3601947-1

Page 1 of 1

Sample Number	2643409-4
Sampled Date	Jun 12, 2026 10:07 AM
Sample Description	Wastewater
Location	Equalization (2T-9610)
Date Analysis Commenced	Jun 12, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	225	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	996	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	36.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2030	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	214	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2643409

Date Received : Jun 12, 2026

Date Reported : Jun 19, 2026

Report Number : 3601947-2

Page 1 of 1

Sample Number : 2643409-4
Sampled Date : Jun 12, 2026 10:07 AM
Sample Description : Wastewater
Location : Equalization (2T-9610)
Date Analysis Commenced : Jun 13, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	590	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Analysis / Test Report

TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2643409

Date Received : Jun 12, 2026
Date Reported : Jun 19, 2026
Report Number : 3601948-1

Page 1 of 1

Sample Number : 2643409-5
Sampled Date : Jun 12, 2026 10:01 AM
Sample Description : Wastewater
Location : Drainage before Check Basin (2T-9640)
Date Analysis Commenced : Jun 12, 2026
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	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	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	26	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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.8	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1190	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	<1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	<5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chumon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2643409

Date Received : Jun 12, 2026

Date Reported : Jun 19, 2026

Report Number : 3601948-2

Page 1 of 1

Sample Number : 2643409-5
Sampled Date : Jun 12, 2026 10:01 AM
Sample Description : Wastewater
Location : Drainage before Check Basin (2T-9640)
Date Analysis Commenced : Jun 13, 2026
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	Method	Testing Location
Water Testing						
Sulfate	mg/L	0.6	2	461	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

Sampling By : Wanlop Hunchainaow

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Photchana Seeda

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

TESTING
No.0042
Lot ID: 2643409
Date Received : Jun 12, 2026
Date Reported : Jun 19, 2026
Report Number : 3601949-1

Page 1 of 2

Sample Number	2643409-6
Sampled Date	Jun 12, 2026 10:04 AM
Sample Description	Wastewater
Location	Effluent from the Check Basin (2T-9650)
Date Analysis Commenced	Jun 12, 2026
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	40	≤120	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	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	8.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.3	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1130	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	1.9	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried from 103-105 degree C	mg/L	-	5	22	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

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

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038

Technical Management

Photchana S

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Chongchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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TESTING
No.0042

Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-2025-336

Project Name : Environmental Monitoring

Project Location: MMA Site 3

Lot ID: 2643409

Date Received : Jun 12, 2026

Date Reported : Jun 19, 2026

Report Number : 3601949-1

Page 2 of 2

Remark :

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Technical Management

Photchanas

Photchana Seeda
Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Approved by

D. Johnson

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location: MMA Site 3

Lot ID: 2643409

Date Received : Jun 12, 2026

Date Reported : Jun 19, 2026

Report Number : 3601949-2

Page 1 of 1

Sample Number	2643409-6						
Sampled Date	Jun 12, 2026 10:04 AM						
Sample Description	Wastewater						
Location	Effluent from the Check Basin (2T-9650)						
Date Analysis Commenced	Jun 13, 2026						
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	476	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-SO4 (E)	Rayong

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

Sampling By : Wanlop Hunchainaow

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2643407

Date Received : Jun 12, 2026

Date Reported : Jun 17, 2026

Report Number : 3574377-1

Page 1 of 1

Sample Number : 2643407-1
Sampled Date : Jun 12, 2026 10:28 AM
Sample Description : Wastewater
Location : บริเวณขาออกจากกระบวนน้ำหล่อเย็นก่อนเข้าระบบบำบัดน้ำเสียโรงงาน MMA1
Date Analysis Commenced : Jun 12, 2026
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Residual Chlorine - as ClO ₂	mg/L	-	0.01	0.28	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Rayong

Sampling By : Wanlop Hunchainaow

Remark :

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PhotchanaS

Photchana Seeda

Scientist (4)

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2654829

Date Received : Jun 25, 2026
Date Reported : Jun 29, 2026
Report Number : 3605040-1

Page 1 of 1

Sample Number : 2654829-1
Sampled Date : Jun 25, 2026 6:00 AM
Sample Description : Wastewater
Location : บริเวณขาออกจากระบบน้ำหล่อเย็นก่อนเข้าระบบบำบัดน้ำเสียโรงงาน MMA2
Date Analysis Commenced : Jun 25, 2026
Condition of Sample : Contained in one plastic bottle, refrigerated (client container)

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Residual Chlorine - as ClO ₂	mg/L	-	0.01	<0.01	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (G)	Rayong

Remark :

- LOD : Limit of Detection
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ภาคผนวก ค-4

ใบรับรองผลการตรวจวัดระดับเสียงโดยทั่วไป



Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825

Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528012-1

Page 1 of 1

Sample Number 2610825-1
Parameter Noise (Leq 24 hrs.)
Location SCG site 3 (GPS 47P 0734042, 1406615)
Measurement Date Mar 02 - Mar 03, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	55.3	73.8	52.6
11:00 AM - 12:00 PM	66.1	76.2	53.6
12:00 PM - 01:00 PM	55.2	70.7	52.9
01:00 PM - 02:00 PM	57.8	71.3	53.3
02:00 PM - 03:00 PM	55.7	71.0	53.1
03:00 PM - 04:00 PM	56.3	74.6	53.5
04:00 PM - 05:00 PM	55.7	68.7	53.5
05:00 PM - 06:00 PM	55.7	78.7	53.3
06:00 PM - 07:00 PM	69.9	78.6	54.0
07:00 PM - 08:00 PM	67.2	74.8	54.1
08:00 PM - 09:00 PM	68.4	76.2	53.5
09:00 PM - 10:00 PM	60.1	71.8	54.2
10:00 PM - 11:00 PM	67.1	75.5	54.3
11:00 PM - 12:00 AM	67.6	74.4	54.3
12:00 AM - 01:00 AM	58.6	68.1	54.9
01:00 AM - 02:00 AM	68.2	76.2	54.7
02:00 AM - 03:00 AM	55.6	62.3	54.6
03:00 AM - 04:00 AM	55.0	64.6	54.1
04:00 AM - 05:00 AM	54.4	59.3	53.7
05:00 AM - 06:00 AM	58.8	70.0	40.9
06:00 AM - 07:00 AM	55.4	68.8	54.0
07:00 AM - 08:00 AM	55.1	67.8	52.8
08:00 AM - 09:00 AM	53.8	64.5	52.7
09:00 AM - 10:00 AM	53.9	64.3	52.2

Leq Average 24 hrs. (dB(A)) 63.3
Lmax (dB(A)) 78.7
L90 (dB(A)) 53.5
Ldn (dB(A)) 69.9
Standard (dB(A)) 70 115

Reference Method : ISO 1996-1 : 2016

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

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825
Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528013-1

Page 1 of 1

Sample Number 2610825-2
Parameter Noise (Leq 24 hrs.)
Location SCG site 3 (GPS 47P 0734042, 1406615)
Measurement Date Mar 03 - Mar 04, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	54.5	72.5	52.1
11:00 AM - 12:00 PM	61.1	66.3	40.6
12:00 PM - 01:00 PM	54.4	77.7	52.7
01:00 PM - 02:00 PM	54.1	66.8	52.6
02:00 PM - 03:00 PM	57.7	65.1	43.9
03:00 PM - 04:00 PM	54.4	64.4	40.4
04:00 PM - 05:00 PM	56.8	78.5	53.2
05:00 PM - 06:00 PM	55.5	68.1	53.9
06:00 PM - 07:00 PM	57.3	66.6	41.8
07:00 PM - 08:00 PM	65.8	74.0	54.0
08:00 PM - 09:00 PM	58.7	71.7	53.9
09:00 PM - 10:00 PM	66.8	75.2	54.4
10:00 PM - 11:00 PM	67.3	75.1	55.1
11:00 PM - 12:00 AM	57.6	65.9	55.2
12:00 AM - 01:00 AM	68.3	74.4	55.5
01:00 AM - 02:00 AM	55.7	61.4	55.1
02:00 AM - 03:00 AM	57.3	66.6	41.8
03:00 AM - 04:00 AM	58.7	67.9	55.0
04:00 AM - 05:00 AM	55.4	62.7	54.8
05:00 AM - 06:00 AM	55.7	61.8	42.9
06:00 AM - 07:00 AM	56.8	72.3	54.7
07:00 AM - 08:00 AM	55.2	76.0	52.8
08:00 AM - 09:00 AM	55.5	68.3	52.9
09:00 AM - 10:00 AM	56.2	75.2	52.0

Leq Average 24 hrs. (dB(A)) 61.0
Lmax (dB(A)) 78.5
L90 (dB(A)) 52.9
Ldn (dB(A)) 68.5

Standard (dB(A))

70

115

Reference Method : ISO 1996-1 : 2016

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
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Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825

Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528014-1

Page 1 of 1

Sample Number 2610825-3
Parameter Noise (Leq 24 hrs.)
Location SCG site 3 (GPS 47P 0734042, 1406615)
Measurement Date Mar 04 - Mar 05, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	57.4	79.5	52.5
11:00 AM - 12:00 PM	59.6	67.5	42.5
12:00 PM - 01:00 PM	59.6	67.9	41.3
01:00 PM - 02:00 PM	56.0	68.0	53.5
02:00 PM - 03:00 PM	55.2	70.9	53.3
03:00 PM - 04:00 PM	55.7	73.8	53.4
04:00 PM - 05:00 PM	57.5	80.1	53.5
05:00 PM - 06:00 PM	58.3	86.2	54.1
06:00 PM - 07:00 PM	60.8	69.7	41.7
07:00 PM - 08:00 PM	56.5	71.4	54.3
08:00 PM - 09:00 PM	55.9	63.5	41.7
09:00 PM - 10:00 PM	56.1	65.2	41.5
10:00 PM - 11:00 PM	50.7	62.3	42.0
11:00 PM - 12:00 AM	57.0	64.3	42.0
12:00 AM - 01:00 AM	56.5	63.4	42.6
01:00 AM - 02:00 AM	56.7	72.0	54.9
02:00 AM - 03:00 AM	55.6	62.1	55.0
03:00 AM - 04:00 AM	56.6	67.2	55.2
04:00 AM - 05:00 AM	55.7	63.1	54.9
05:00 AM - 06:00 AM	60.6	69.1	42.5
06:00 AM - 07:00 AM	57.0	71.3	55.1
07:00 AM - 08:00 AM	56.6	68.6	54.9
08:00 AM - 09:00 AM	56.4	69.1	54.3
09:00 AM - 10:00 AM	56.8	74.3	53.8

Leq Average 24 hrs. (dB(A)) 57.3
Lmax (dB(A)) 86.2
L90 (dB(A)) 53.4
Ldn (dB(A)) 63.4

Standard (dB(A)) 70 115

Reference Method : ISO 1996-1 : 2016

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

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Technical Management

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Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825

Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528015-1

Page 1 of 1

Sample Number 2610825-4
Parameter Noise (Leq 24 hrs.)
Location SCG site 3 (GPS 47P 0734042, 1406615)
Measurement Date Mar 05 - Mar 06, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	57.0	67.9	41.2
11:00 AM - 12:00 PM	62.0	68.3	50.7
12:00 PM - 01:00 PM	56.7	67.5	53.6
01:00 PM - 02:00 PM	62.2	72.8	53.9
02:00 PM - 03:00 PM	55.3	69.1	53.4
03:00 PM - 04:00 PM	58.0	81.0	53.6
04:00 PM - 05:00 PM	55.5	70.0	53.5
05:00 PM - 06:00 PM	57.6	83.1	53.9
06:00 PM - 07:00 PM	60.5	68.5	42.1
07:00 PM - 08:00 PM	56.1	64.3	41.8
08:00 PM - 09:00 PM	57.6	65.8	54.2
09:00 PM - 10:00 PM	57.8	65.4	41.6
10:00 PM - 11:00 PM	55.1	65.4	41.7
11:00 PM - 12:00 AM	55.9	65.4	42.2
12:00 AM - 01:00 AM	55.2	59.7	54.8
01:00 AM - 02:00 AM	55.3	64.8	54.7
02:00 AM - 03:00 AM	55.0	64.8	54.4
03:00 AM - 04:00 AM	54.8	61.0	54.2
04:00 AM - 05:00 AM	55.3	64.2	54.6
05:00 AM - 06:00 AM	62.5	72.4	42.0
06:00 AM - 07:00 AM	56.6	67.6	54.4
07:00 AM - 08:00 AM	55.2	66.4	52.5
08:00 AM - 09:00 AM	55.8	69.4	52.6
09:00 AM - 10:00 AM	56.1	79.4	52.5

Leq Average 24 hrs. (dB(A)) 57.8
Lmax (dB(A)) 83.1
L90 (dB(A)) 53.4
Ldn (dB(A)) 63.7

Standard (dB(A)) 70 115

Reference Method : ISO 1996-1 : 2016

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

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Technical Management

Thanita K.

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Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head



Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825
Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528016-1

Page 1 of 1

Sample Number 2610825-5
Parameter Noise (Leq 24 hrs.)
Location SCG site 3 (GPS 47P 0734042, 1406615)
Measurement Date Mar 06 - Mar 07, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	57.2	78.1	53.1
11:00 AM - 12:00 PM	61.9	68.2	44.2
12:00 PM - 01:00 PM	55.1	67.2	41.3
01:00 PM - 02:00 PM	56.5	80.3	53.1
02:00 PM - 03:00 PM	55.4	71.4	53.2
03:00 PM - 04:00 PM	57.7	78.4	54.2
04:00 PM - 05:00 PM	56.4	69.2	54.2
05:00 PM - 06:00 PM	56.7	79.5	53.8
06:00 PM - 07:00 PM	60.7	68.9	42.2
07:00 PM - 08:00 PM	58.4	72.7	53.9
08:00 PM - 09:00 PM	54.7	63.0	53.3
09:00 PM - 10:00 PM	54.9	61.7	53.6
10:00 PM - 11:00 PM	54.7	61.6	53.6
11:00 PM - 12:00 AM	68.9	77.5	53.8
12:00 AM - 01:00 AM	65.1	76.6	54.6
01:00 AM - 02:00 AM	54.5	67.2	53.6
02:00 AM - 03:00 AM	53.9	65.0	53.5
03:00 AM - 04:00 AM	54.8	61.3	53.9
04:00 AM - 05:00 AM	55.1	65.6	54.5
05:00 AM - 06:00 AM	63.2	73.4	42.1
06:00 AM - 07:00 AM	55.9	72.0	54.2
07:00 AM - 08:00 AM	56.1	71.9	53.3
08:00 AM - 09:00 AM	56.2	77.8	52.5
09:00 AM - 10:00 AM	55.9	72.9	52.1

Leq Average 24 hrs. (dB(A)) 59.9
Lmax (dB(A)) 80.3
L90 (dB(A)) 53.5
Ldn (dB(A)) 68.2

Standard (dB(A)) 70

115

Reference Method : ISO 1996-1 : 2016

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

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

Technical Management

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Analysis / Test Report



Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825
Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528017-1

Page 1 of 1

Sample Number 2610825-6
Parameter Noise (Leq 24 hrs.)
Location SCG site 3 (GPS 47P 0734042, 1406615)
Measurement Date Mar 07 - Mar 08, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	61.7	69.3	40.2
11:00 AM - 12:00 PM	59.3	69.7	40.0
12:00 PM - 01:00 PM	64.3	77.6	51.1
01:00 PM - 02:00 PM	55.2	68.4	41.4
02:00 PM - 03:00 PM	58.6	79.5	53.4
03:00 PM - 04:00 PM	64.2	83.0	55.2
04:00 PM - 05:00 PM	56.3	72.7	54.1
05:00 PM - 06:00 PM	56.4	69.2	54.4
06:00 PM - 07:00 PM	62.3	70.2	44.3
07:00 PM - 08:00 PM	58.0	66.9	42.8
08:00 PM - 09:00 PM	59.1	67.1	42.5
09:00 PM - 10:00 PM	59.3	67.8	41.1
10:00 PM - 11:00 PM	54.4	65.1	53.5
11:00 PM - 12:00 AM	61.1	68.9	42.1
12:00 AM - 01:00 AM	55.5	65.2	54.3
01:00 AM - 02:00 AM	62.4	69.5	41.9
02:00 AM - 03:00 AM	55.4	64.5	41.6
03:00 AM - 04:00 AM	54.2	63.7	53.5
04:00 AM - 05:00 AM	54.3	67.1	53.8
05:00 AM - 06:00 AM	64.0	73.9	41.9
06:00 AM - 07:00 AM	56.0	75.3	54.1
07:00 AM - 08:00 AM	55.4	69.0	53.3
08:00 AM - 09:00 AM	54.8	71.2	52.6
09:00 AM - 10:00 AM	54.3	67.6	52.0

Leq Average 24 hrs. (dB(A)) 59.6
Lmax (dB(A)) 83.0
L90 (dB(A)) 51.1
Ldn (dB(A)) 65.7

Standard (dB(A)) 70 115

Reference Method : ISO 1996-1 : 2016

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
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Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825

Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528018-1

Page 1 of 1

Sample Number 2610825-7
Parameter Noise (Leq 24 hrs.)
Location SCG site 3 (GPS 47P 0734042, 1406615)
Measurement Date Mar 08 - Mar 09, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 734225

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	64.3	73.5	39.6
11:00 AM - 12:00 PM	63.4	73.3	39.9
12:00 PM - 01:00 PM	56.4	81.4	54.4
01:00 PM - 02:00 PM	57.5	70.2	55.3
02:00 PM - 03:00 PM	57.6	72.8	55.8
03:00 PM - 04:00 PM	62.3	70.5	43.6
04:00 PM - 05:00 PM	58.5	70.0	43.5
05:00 PM - 06:00 PM	56.9	70.1	55.7
06:00 PM - 07:00 PM	64.0	71.2	43.2
07:00 PM - 08:00 PM	57.5	66.2	42.7
08:00 PM - 09:00 PM	63.9	76.3	54.4
09:00 PM - 10:00 PM	61.0	68.4	41.6
10:00 PM - 11:00 PM	54.7	68.5	53.6
11:00 PM - 12:00 AM	54.4	61.0	53.9
12:00 AM - 01:00 AM	54.2	62.9	53.8
01:00 AM - 02:00 AM	64.8	70.4	41.6
02:00 AM - 03:00 AM	58.4	71.2	54.2
03:00 AM - 04:00 AM	54.6	61.7	54.1
04:00 AM - 05:00 AM	54.3	62.5	53.7
05:00 AM - 06:00 AM	65.0	76.9	41.3
06:00 AM - 07:00 AM	56.5	71.5	54.0
07:00 AM - 08:00 AM	55.8	71.0	52.7
08:00 AM - 09:00 AM	55.4	76.4	52.6
09:00 AM - 10:00 AM	60.8	89.5	53.0

Leq Average 24 hrs. (dB(A)) 60.5
Lmax (dB(A)) 89.5
L90 (dB(A)) 53.0
Ldn (dB(A)) 66.4

Standard (dB(A))

70

115

Reference Method : ISO 1996-1 : 2016

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

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Section Head

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Life Sciences

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Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825
Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528019-1

Page 1 of 1

Sample Number 2610825-8
Parameter Noise (Leq 24 hrs.)
Location วัดหนองแฟบ (GPS 47P 0729842, 1403394)
Measurement Date Mar 02 - Mar 03, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 233184

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	52.8	79.3	48.4
03:00 PM - 04:00 PM	52.4	68.0	49.1
04:00 PM - 05:00 PM	59.6	78.3	49.5
05:00 PM - 06:00 PM	61.4	79.4	54.5
06:00 PM - 07:00 PM	62.5	71.9	51.1
07:00 PM - 08:00 PM	53.0	68.1	47.2
08:00 PM - 09:00 PM	47.7	61.4	46.0
09:00 PM - 10:00 PM	48.8	68.0	45.5
10:00 PM - 11:00 PM	55.8	70.5	50.0
11:00 PM - 12:00 AM	52.3	69.0	48.3
12:00 AM - 01:00 AM	57.8	73.3	45.7
01:00 AM - 02:00 AM	51.5	66.3	47.5
02:00 AM - 03:00 AM	47.6	65.1	45.5
03:00 AM - 04:00 AM	55.3	66.6	45.3
04:00 AM - 05:00 AM	55.7	69.6	50.2
05:00 AM - 06:00 AM	62.4	78.1	49.6
06:00 AM - 07:00 AM	64.8	77.9	52.8
07:00 AM - 08:00 AM	55.5	76.5	49.6
08:00 AM - 09:00 AM	51.5	74.4	44.7
09:00 AM - 10:00 AM	49.9	68.4	44.8
10:00 AM - 11:00 AM	52.5	68.8	48.9
11:00 AM - 12:00 PM	51.1	67.8	46.3
12:00 PM - 01:00 PM	50.2	67.8	46.2
01:00 PM - 02:00 PM	50.4	68.2	45.9

Leq Average 24 hrs. (dB(A)) 57.2
Lmax (dB(A)) 79.4
L90 (dB(A)) 47.5
Ldn (dB(A)) 64.9

Standard (dB(A))

70

115

Reference Method : ISO 1996-1 : 2016

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

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head



Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825

Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528020-1

Page 1 of 1

Sample Number 2610825-9
Parameter Noise (Leq 24 hrs.)
Location วัดหนองแฟบ (GPS 47P 0729842, 1403394)
Measurement Date Mar 03 - Mar 04, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 233184

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	50.8	64.4	46.6
03:00 PM - 04:00 PM	51.7	72.3	45.4
04:00 PM - 05:00 PM	51.9	76.4	45.6
05:00 PM - 06:00 PM	50.8	71.7	44.3
06:00 PM - 07:00 PM	66.5	76.9	51.9
07:00 PM - 08:00 PM	54.0	69.4	48.6
08:00 PM - 09:00 PM	48.0	61.0	45.6
09:00 PM - 10:00 PM	50.8	68.1	45.3
10:00 PM - 11:00 PM	52.9	63.2	48.6
11:00 PM - 12:00 AM	49.5	70.9	43.1
12:00 AM - 01:00 AM	51.5	63.2	41.2
01:00 AM - 02:00 AM	50.4	62.1	40.5
02:00 AM - 03:00 AM	43.7	64.8	40.5
03:00 AM - 04:00 AM	44.4	65.6	40.7
04:00 AM - 05:00 AM	45.2	66.1	40.1
05:00 AM - 06:00 AM	56.0	69.5	40.8
06:00 AM - 07:00 AM	56.3	78.9	47.0
07:00 AM - 08:00 AM	64.9	81.2	49.3
08:00 AM - 09:00 AM	52.6	76.9	44.6
09:00 AM - 10:00 AM	50.1	71.7	43.8
10:00 AM - 11:00 AM	49.7	71.5	45.0
11:00 AM - 12:00 PM	50.3	68.3	44.8
12:00 PM - 01:00 PM	48.8	66.6	44.1
01:00 PM - 02:00 PM	50.9	69.0	43.9

Leq Average 24 hrs. (dB(A)) 56.5
Lmax (dB(A)) 81.2
L90 (dB(A)) 44.6
Ldn (dB(A)) 59.9

Standard (dB(A))

70

115

Reference Method : ISO 1996-1 : 2016

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

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head



Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825

Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528021-1

Page 1 of 1

Sample Number 2610825-10
Parameter Noise (Leq 24 hrs.)
Location วัดหนองแฟบ (GPS 47P 0729842, 1403394)
Measurement Date Mar 04 - Mar 05, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 233184

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	50.7	62.8	45.2
03:00 PM - 04:00 PM	52.6	71.8	45.9
04:00 PM - 05:00 PM	52.9	78.2	45.5
05:00 PM - 06:00 PM	49.4	68.1	44.2
06:00 PM - 07:00 PM	60.5	72.0	46.1
07:00 PM - 08:00 PM	47.7	63.2	45.0
08:00 PM - 09:00 PM	47.7	65.9	45.1
09:00 PM - 10:00 PM	51.3	68.1	45.4
10:00 PM - 11:00 PM	47.0	65.1	44.9
11:00 PM - 12:00 AM	50.8	62.7	45.5
12:00 AM - 01:00 AM	47.8	59.8	41.3
01:00 AM - 02:00 AM	46.1	68.3	40.7
02:00 AM - 03:00 AM	47.3	70.7	40.4
03:00 AM - 04:00 AM	43.2	66.3	40.2
04:00 AM - 05:00 AM	43.4	66.6	40.0
05:00 AM - 06:00 AM	55.7	69.5	40.4
06:00 AM - 07:00 AM	66.6	80.8	46.0
07:00 AM - 08:00 AM	52.3	68.0	46.8
08:00 AM - 09:00 AM	50.9	69.3	44.1
09:00 AM - 10:00 AM	53.4	74.5	46.2
10:00 AM - 11:00 AM	52.3	86.6	46.1
11:00 AM - 12:00 PM	52.4	77.1	43.9
12:00 PM - 01:00 PM	49.1	69.7	44.8
01:00 PM - 02:00 PM	50.0	67.2	44.3

Leq Average 24 hrs. (dB(A)) 55.4
Lmax (dB(A)) 86.6
L90 (dB(A)) 44.9
Ldn (dB(A)) 63.7

Standard (dB(A)) 70 115

Reference Method : ISO 1996-1 : 2016

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.

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Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825

Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528022-1

Page 1 of 1

Sample Number 2610825-11
Parameter Noise (Leq 24 hrs.)
Location วัดหนองแฟบ (GPS 47P 0729842, 1403394)
Measurement Date Mar 05 - Mar 06, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 233184

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	54.8	85.1	43.4
03:00 PM - 04:00 PM	61.8	74.7	44.5
04:00 PM - 05:00 PM	63.8	75.3	45.8
05:00 PM - 06:00 PM	50.7	68.2	45.5
06:00 PM - 07:00 PM	64.7	74.9	46.4
07:00 PM - 08:00 PM	49.7	73.4	46.8
08:00 PM - 09:00 PM	49.5	63.3	47.7
09:00 PM - 10:00 PM	58.4	66.8	48.9
10:00 PM - 11:00 PM	57.7	73.4	48.8
11:00 PM - 12:00 AM	54.8	65.5	48.3
12:00 AM - 01:00 AM	52.4	68.7	48.8
01:00 AM - 02:00 AM	49.7	61.7	48.4
02:00 AM - 03:00 AM	49.6	62.6	48.4
03:00 AM - 04:00 AM	49.3	63.9	48.1
04:00 AM - 05:00 AM	49.4	68.1	47.8
05:00 AM - 06:00 AM	59.1	70.4	49.0
06:00 AM - 07:00 AM	63.6	73.8	44.2
07:00 AM - 08:00 AM	61.0	82.9	51.2
08:00 AM - 09:00 AM	54.9	70.2	48.0
09:00 AM - 10:00 AM	56.8	69.6	48.2
10:00 AM - 11:00 AM	58.0	73.3	48.1
11:00 AM - 12:00 PM	57.0	80.3	47.7
12:00 PM - 01:00 PM	58.0	75.5	50.0
01:00 PM - 02:00 PM	55.2	71.9	48.9

Leq Average 24 hrs. (dB(A)) 58.5
Lmax (dB(A)) 85.1
L90 (dB(A)) 48.1
Ldn (dB(A)) 63.8

Standard (dB(A)) 70 115

Reference Method : ISO 1996-1 : 2016

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.

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Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825
Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528023-1

Page 1 of 1

Sample Number 2610825-12
Parameter Noise (Leq 24 hrs.)
Location วัดหนองแฟบ (GPS 47P 0729842, 1403394)
Measurement Date Mar 06 - Mar 07, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 233184

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	56.3	73.6	47.2
03:00 PM - 04:00 PM	57.9	75.5	46.2
04:00 PM - 05:00 PM	54.8	76.2	46.3
05:00 PM - 06:00 PM	52.0	65.8	45.7
06:00 PM - 07:00 PM	51.7	79.6	45.2
07:00 PM - 08:00 PM	61.3	75.2	48.1
08:00 PM - 09:00 PM	51.6	67.9	46.8
09:00 PM - 10:00 PM	47.8	62.4	44.9
10:00 PM - 11:00 PM	50.9	66.9	48.2
11:00 PM - 12:00 AM	48.7	65.7	45.9
12:00 AM - 01:00 AM	47.1	63.0	44.5
01:00 AM - 02:00 AM	47.2	68.0	43.7
02:00 AM - 03:00 AM	50.2	65.2	48.1
03:00 AM - 04:00 AM	48.5	65.1	46.5
04:00 AM - 05:00 AM	47.8	58.4	46.1
05:00 AM - 06:00 AM	48.8	65.4	46.8
06:00 AM - 07:00 AM	64.9	78.4	48.1
07:00 AM - 08:00 AM	52.9	69.5	49.8
08:00 AM - 09:00 AM	52.2	72.0	46.0
09:00 AM - 10:00 AM	49.2	64.9	44.0
10:00 AM - 11:00 AM	61.3	97.1	48.7
11:00 AM - 12:00 PM	51.7	67.7	48.2
12:00 PM - 01:00 PM	51.5	69.0	47.3
01:00 PM - 02:00 PM	53.9	72.6	46.3

Leq Average 24 hrs. (dB(A)) 55.9
Lmax (dB(A)) 97.1
L90 (dB(A)) 46.3
Ldn (dB(A)) 62.5

Standard (dB(A)) 70 115

Reference Method : ISO 1996-1 : 2016

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

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head



Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825

Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528024-1

Page 1 of 1

Sample Number 2610825-13
Parameter Noise (Leq 24 hrs.)
Location วัดหนองแฟบ (GPS 47P 0729842, 1403394)
Measurement Date Mar 07 - Mar 08, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 233184

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	59.3	73.9	45.7
03:00 PM - 04:00 PM	50.1	68.6	44.3
04:00 PM - 05:00 PM	52.4	64.9	44.3
05:00 PM - 06:00 PM	49.1	66.0	43.2
06:00 PM - 07:00 PM	48.3	72.4	42.2
07:00 PM - 08:00 PM	62.7	80.1	44.5
08:00 PM - 09:00 PM	48.0	63.3	43.9
09:00 PM - 10:00 PM	48.9	62.1	43.6
10:00 PM - 11:00 PM	53.4	66.3	43.4
11:00 PM - 12:00 AM	50.8	84.0	44.0
12:00 AM - 01:00 AM	55.4	64.7	46.7
01:00 AM - 02:00 AM	49.5	68.5	43.4
02:00 AM - 03:00 AM	45.2	67.4	40.2
03:00 AM - 04:00 AM	45.7	67.6	42.9
04:00 AM - 05:00 AM	56.0	85.0	40.9
05:00 AM - 06:00 AM	59.6	82.4	47.3
06:00 AM - 07:00 AM	64.8	76.3	44.2
07:00 AM - 08:00 AM	51.4	70.8	46.1
08:00 AM - 09:00 AM	50.5	72.2	45.1
09:00 AM - 10:00 AM	50.1	67.3	43.4
10:00 AM - 11:00 AM	49.8	69.2	43.3
11:00 AM - 12:00 PM	50.4	66.7	45.8
12:00 PM - 01:00 PM	50.8	69.6	43.5
01:00 PM - 02:00 PM	51.4	72.8	43.4

Leq Average 24 hrs. (dB(A)) 55.9
Lmax (dB(A)) 85.0
L90 (dB(A)) 43.6
Ldn (dB(A)) 63.7

Standard (dB(A))

70

115

Reference Method : ISO 1996-1 : 2016

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

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825

Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528025-1

Page 1 of 1

Sample Number 2610825-14
Parameter Noise (Leq 24 hrs.)
Location วัดหนองแฟบ (GPS 47P 0729842, 1403394)
Measurement Date Mar 08 - Mar 09, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 233184

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	66.5	78.6	43.1
03:00 PM - 04:00 PM	60.3	93.6	45.5
04:00 PM - 05:00 PM	49.3	70.2	42.9
05:00 PM - 06:00 PM	48.5	65.7	42.9
06:00 PM - 07:00 PM	47.3	65.9	42.0
07:00 PM - 08:00 PM	66.4	75.3	43.9
08:00 PM - 09:00 PM	49.2	66.4	46.4
09:00 PM - 10:00 PM	47.2	64.4	42.2
10:00 PM - 11:00 PM	45.0	61.8	42.4
11:00 PM - 12:00 AM	45.9	62.4	44.2
12:00 AM - 01:00 AM	54.5	70.4	44.3
01:00 AM - 02:00 AM	56.2	66.4	43.0
02:00 AM - 03:00 AM	46.5	66.6	41.3
03:00 AM - 04:00 AM	43.2	65.0	41.2
04:00 AM - 05:00 AM	45.4	65.3	41.3
05:00 AM - 06:00 AM	49.4	72.7	43.2
06:00 AM - 07:00 AM	65.4	75.6	46.0
07:00 AM - 08:00 AM	53.0	70.7	48.0
08:00 AM - 09:00 AM	52.4	72.3	46.2
09:00 AM - 10:00 AM	51.1	74.7	43.7
10:00 AM - 11:00 AM	56.1	73.6	47.1
11:00 AM - 12:00 PM	54.7	74.0	50.8
12:00 PM - 01:00 PM	54.0	81.0	48.7
01:00 PM - 02:00 PM	54.3	71.8	45.3

Leq Average 24 hrs. (dB(A)) 58.3
Lmax (dB(A)) 93.6
L90 (dB(A)) 43.7
Ldn (dB(A)) 63.7

Standard (dB(A))

70

115

Reference Method : ISO 1996-1 : 2016

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

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825

Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528026-1

Page 1 of 1

Sample Number 2610825-15
Parameter Noise (Leq 24 hrs.)
Location โรงเรียนบ้านมาบตาพุด (GPS 47P 0735356, 1406702)
Measurement Date Mar 02 - Mar 03, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 734220

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	65.5	84.3	58.8
12:00 PM - 01:00 PM	63.0	74.6	57.8
01:00 PM - 02:00 PM	59.8	73.5	51.2
02:00 PM - 03:00 PM	66.7	81.9	60.2
03:00 PM - 04:00 PM	58.2	78.4	53.5
04:00 PM - 05:00 PM	59.1	79.2	52.8
05:00 PM - 06:00 PM	53.0	70.7	47.8
06:00 PM - 07:00 PM	51.1	76.3	47.0
07:00 PM - 08:00 PM	49.3	66.6	46.2
08:00 PM - 09:00 PM	48.4	66.6	45.6
09:00 PM - 10:00 PM	47.6	61.5	45.0
10:00 PM - 11:00 PM	48.1	69.5	44.1
11:00 PM - 12:00 AM	47.1	63.6	44.0
12:00 AM - 01:00 AM	46.2	63.3	43.7
01:00 AM - 02:00 AM	46.1	60.6	43.4
02:00 AM - 03:00 AM	45.5	56.9	43.5
03:00 AM - 04:00 AM	46.2	64.6	44.1
04:00 AM - 05:00 AM	48.6	66.6	44.2
05:00 AM - 06:00 AM	52.3	74.9	46.2
06:00 AM - 07:00 AM	53.7	71.9	48.0
07:00 AM - 08:00 AM	51.3	76.1	46.7
08:00 AM - 09:00 AM	59.9	80.7	48.3
09:00 AM - 10:00 AM	68.5	83.1	52.9
10:00 AM - 11:00 AM	68.3	82.5	50.5

Leq Average 24 hrs. (dB(A)) 60.8
Lmax (dB(A)) 84.3
L90 (dB(A)) 46.7
Ldn (dB(A)) 61.7
Standard (dB(A)) 70 115

Reference Method : ISO 1996-1 : 2016

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

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Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825

Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528027-1

Page 1 of 1

Sample Number 2610825-16
Parameter Noise (Leq 24 hrs.)
Location โรงเรียนบ้านมาบตาพุด (GPS 47P 0735356, 1406702)
Measurement Date Mar 03 - Mar 04, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 734220

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	66.7	82.0	48.3
12:00 PM - 01:00 PM	55.9	75.4	49.7
01:00 PM - 02:00 PM	64.0	80.1	52.4
02:00 PM - 03:00 PM	66.4	80.7	44.0
03:00 PM - 04:00 PM	65.1	81.8	43.6
04:00 PM - 05:00 PM	57.5	82.0	48.6
05:00 PM - 06:00 PM	52.2	70.4	47.9
06:00 PM - 07:00 PM	50.3	68.2	46.5
07:00 PM - 08:00 PM	49.4	65.3	46.2
08:00 PM - 09:00 PM	48.0	68.6	44.8
09:00 PM - 10:00 PM	47.6	64.4	44.4
10:00 PM - 11:00 PM	46.9	62.7	44.1
11:00 PM - 12:00 AM	46.7	64.4	44.3
12:00 AM - 01:00 AM	46.5	63.3	44.2
01:00 AM - 02:00 AM	46.0	57.3	43.8
02:00 AM - 03:00 AM	46.1	58.7	44.2
03:00 AM - 04:00 AM	47.1	65.7	44.5
04:00 AM - 05:00 AM	49.6	66.5	45.5
05:00 AM - 06:00 AM	53.4	68.4	49.0
06:00 AM - 07:00 AM	67.8	90.3	56.4
07:00 AM - 08:00 AM	66.7	79.3	55.9
08:00 AM - 09:00 AM	60.4	77.0	56.2
09:00 AM - 10:00 AM	62.8	74.0	57.5
10:00 AM - 11:00 AM	58.5	76.6	52.1

Leq Average 24 hrs. (dB(A)) 61.1
Lmax (dB(A)) 90.3
L90 (dB(A)) 46.2
Ldn (dB(A)) 65.8
Standard (dB(A)) 70 115

Reference Method : ISO 1996-1 : 2016

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

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

Technical Management

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Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825

Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528028-1

Page 1 of 1

Sample Number 2610825-17
Parameter Noise (Leq 24 hrs.)
Location โรงเรียนบ้านมาบตาพุด (GPS 47P 0735356, 1406702)
Measurement Date Mar 04 - Mar 05, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 734220

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	60.7	79.1	54.2
12:00 PM - 01:00 PM	62.9	79.4	54.5
01:00 PM - 02:00 PM	64.2	80.2	54.2
02:00 PM - 03:00 PM	58.3	81.0	48.9
03:00 PM - 04:00 PM	59.7	79.4	54.3
04:00 PM - 05:00 PM	66.8	89.5	57.4
05:00 PM - 06:00 PM	62.5	77.9	55.7
06:00 PM - 07:00 PM	56.8	75.3	48.8
07:00 PM - 08:00 PM	51.3	76.4	47.8
08:00 PM - 09:00 PM	50.2	68.0	46.2
09:00 PM - 10:00 PM	49.1	70.1	45.4
10:00 PM - 11:00 PM	47.4	63.6	44.7
11:00 PM - 12:00 AM	46.4	67.1	43.9
12:00 AM - 01:00 AM	45.9	62.6	43.8
01:00 AM - 02:00 AM	46.4	66.1	44.2
02:00 AM - 03:00 AM	46.7	60.7	44.8
03:00 AM - 04:00 AM	47.6	64.4	45.3
04:00 AM - 05:00 AM	49.8	69.9	45.8
05:00 AM - 06:00 AM	60.9	76.0	48.5
06:00 AM - 07:00 AM	65.1	82.4	58.8
07:00 AM - 08:00 AM	60.0	74.6	44.4
08:00 AM - 09:00 AM	59.8	74.0	42.0
09:00 AM - 10:00 AM	58.2	73.5	39.8
10:00 AM - 11:00 AM	47.4	66.9	41.2

Leq Average 24 hrs. (dB(A)) 59.7
Lmax (dB(A)) 89.5
L90 (dB(A)) 45.8
Ldn (dB(A)) 64.4

Standard (dB(A)) 70 115

Reference Method : ISO 1996-1 : 2016

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

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head



Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825

Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528029-1

Page 1 of 1

Sample Number 2610825-18
Parameter Noise (Leq 24 hrs.)
Location โรงเรียนบ้านมาบตาพุด (GPS 47P 0735356, 1406702)
Measurement Date Mar 05 - Mar 06, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 734220

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	55.5	71.6	43.9
12:00 PM - 01:00 PM	66.4	80.7	44.0
01:00 PM - 02:00 PM	65.1	81.8	43.6
02:00 PM - 03:00 PM	58.2	73.4	51.7
03:00 PM - 04:00 PM	58.1	83.9	52.9
04:00 PM - 05:00 PM	61.1	83.0	55.7
05:00 PM - 06:00 PM	62.0	80.3	49.6
06:00 PM - 07:00 PM	52.1	66.6	47.8
07:00 PM - 08:00 PM	50.7	66.2	46.9
08:00 PM - 09:00 PM	50.1	73.3	45.9
09:00 PM - 10:00 PM	47.7	65.1	44.9
10:00 PM - 11:00 PM	46.9	60.8	44.2
11:00 PM - 12:00 AM	46.8	61.6	44.5
12:00 AM - 01:00 AM	45.7	59.4	43.7
01:00 AM - 02:00 AM	46.3	62.5	44.5
02:00 AM - 03:00 AM	46.7	63.9	45.0
03:00 AM - 04:00 AM	46.1	61.6	44.5
04:00 AM - 05:00 AM	48.9	63.7	45.3
05:00 AM - 06:00 AM	52.8	72.1	47.5
06:00 AM - 07:00 AM	54.7	67.4	50.1
07:00 AM - 08:00 AM	65.2	87.3	49.2
08:00 AM - 09:00 AM	61.0	75.1	55.2
09:00 AM - 10:00 AM	60.2	82.1	50.0
10:00 AM - 11:00 AM	63.2	75.9	58.6

Leq Average 24 hrs. (dB(A)) 59.4
Lmax (dB(A)) 87.3
L90 (dB(A)) 45.9
Ldn (dB(A)) 60.8

Standard (dB(A)) 70 115

Reference Method : ISO 1996-1 : 2016

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

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head



Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825

Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528030-1

Page 1 of 1

Sample Number 2610825-19
Parameter Noise (Leq 24 hrs.)
Location โรงเรียนบ้านมาบตาพุด (GPS 47P 0735356, 1406702)
Measurement Date Mar 06 - Mar 07, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 734220

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	66.5	84.6	62.1
12:00 PM - 01:00 PM	65.2	84.4	58.8
01:00 PM - 02:00 PM	61.5	81.4	55.0
02:00 PM - 03:00 PM	60.2	76.2	54.4
03:00 PM - 04:00 PM	64.4	87.2	56.5
04:00 PM - 05:00 PM	58.5	78.8	52.8
05:00 PM - 06:00 PM	55.5	80.1	49.3
06:00 PM - 07:00 PM	52.3	76.0	47.9
07:00 PM - 08:00 PM	64.5	82.1	48.2
08:00 PM - 09:00 PM	57.0	68.4	48.9
09:00 PM - 10:00 PM	48.0	62.7	44.9
10:00 PM - 11:00 PM	47.8	63.8	44.6
11:00 PM - 12:00 AM	46.5	65.9	43.6
12:00 AM - 01:00 AM	47.1	62.7	44.6
01:00 AM - 02:00 AM	46.3	58.6	44.1
02:00 AM - 03:00 AM	45.6	59.2	43.3
03:00 AM - 04:00 AM	46.1	61.6	43.7
04:00 AM - 05:00 AM	46.6	58.0	44.9
05:00 AM - 06:00 AM	47.3	62.0	45.1
06:00 AM - 07:00 AM	53.2	73.6	47.3
07:00 AM - 08:00 AM	55.9	83.7	48.8
08:00 AM - 09:00 AM	62.3	80.4	57.9
09:00 AM - 10:00 AM	61.0	80.2	54.6
10:00 AM - 11:00 AM	57.3	77.2	50.8

Leq Average 24 hrs. (dB(A)) 59.6
Lmax (dB(A)) 87.2
L90 (dB(A)) 48.2
Ldn (dB(A)) 60.6

Standard (dB(A)) 70 115

Reference Method : ISO 1996-1 : 2016

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

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head



Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825

Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528031-1

Page 1 of 1

Sample Number 2610825-20
Parameter Noise (Leq 24 hrs.)
Location โรงเรียนบ้านมาบตาพุด (GPS 47P 0735356, 1406702)
Measurement Date Mar 07 - Mar 08, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 734220

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	60.0	78.4	51.4
12:00 PM - 01:00 PM	55.9	74.2	49.1
01:00 PM - 02:00 PM	62.9	77.5	54.0
02:00 PM - 03:00 PM	66.1	76.9	57.0
03:00 PM - 04:00 PM	64.2	78.6	55.3
04:00 PM - 05:00 PM	52.5	76.5	43.1
05:00 PM - 06:00 PM	56.4	72.3	43.0
06:00 PM - 07:00 PM	55.8	74.2	47.2
07:00 PM - 08:00 PM	51.7	70.0	44.9
08:00 PM - 09:00 PM	49.8	65.9	46.9
09:00 PM - 10:00 PM	49.4	67.0	45.7
10:00 PM - 11:00 PM	49.2	76.1	44.4
11:00 PM - 12:00 AM	46.7	62.6	44.2
12:00 AM - 01:00 AM	46.7	67.3	43.8
01:00 AM - 02:00 AM	46.0	61.0	43.4
02:00 AM - 03:00 AM	46.6	72.4	43.2
03:00 AM - 04:00 AM	45.7	57.9	43.6
04:00 AM - 05:00 AM	49.0	69.2	44.1
05:00 AM - 06:00 AM	49.5	65.6	45.4
06:00 AM - 07:00 AM	52.8	70.8	47.4
07:00 AM - 08:00 AM	51.2	72.4	47.4
08:00 AM - 09:00 AM	56.7	80.7	47.3
09:00 AM - 10:00 AM	60.6	76.5	47.2
10:00 AM - 11:00 AM	52.2	71.5	47.3

Leq Average 24 hrs. (dB(A)) 57.6
Lmax (dB(A)) 80.7
L90 (dB(A)) 45.7
Ldn (dB(A)) 59.2
Standard (dB(A)) 70 115

Reference Method : ISO 1996-1 : 2016

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

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head



Analysis / Test Report



TESTING
No.0042

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2610825
Date Received : Mar 10, 2026
Date Reported : Mar 14, 2026
Report Number: 3528032-1

Page 1 of 1

Sample Number 2610825-21
Parameter Noise (Leq 24 hrs.)
Location โรงเรียนบ้านมาบตาพุด (GPS 47P 0735356, 1406702)
Measurement Date Mar 08 - Mar 09, 2026
Measurement by Santi Chaichana
Sound Level meter Serial No. 734220

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	50.7	65.6	45.5
12:00 PM - 01:00 PM	54.6	77.4	46.7
01:00 PM - 02:00 PM	51.2	70.2	46.9
02:00 PM - 03:00 PM	54.0	74.4	48.0
03:00 PM - 04:00 PM	62.7	79.7	50.8
04:00 PM - 05:00 PM	53.8	74.4	48.7
05:00 PM - 06:00 PM	66.0	83.5	49.5
06:00 PM - 07:00 PM	53.7	73.0	49.0
07:00 PM - 08:00 PM	50.9	64.9	46.8
08:00 PM - 09:00 PM	49.9	69.5	46.4
09:00 PM - 10:00 PM	49.3	73.9	45.3
10:00 PM - 11:00 PM	46.4	65.4	44.2
11:00 PM - 12:00 AM	46.3	62.0	44.0
12:00 AM - 01:00 AM	46.3	61.0	44.2
01:00 AM - 02:00 AM	46.5	61.5	44.5
02:00 AM - 03:00 AM	46.4	62.5	44.3
03:00 AM - 04:00 AM	46.8	60.0	44.8
04:00 AM - 05:00 AM	47.5	70.2	45.8
05:00 AM - 06:00 AM	51.2	65.8	46.6
06:00 AM - 07:00 AM	55.6	73.8	49.3
07:00 AM - 08:00 AM	63.3	80.3	58.0
08:00 AM - 09:00 AM	59.1	76.1	53.8
09:00 AM - 10:00 AM	60.1	76.1	50.7
10:00 AM - 11:00 AM	60.3	82.8	50.3

Leq Average 24 hrs. (dB(A)) 57.4
Lmax (dB(A)) 83.5
L90 (dB(A)) 46.7
Ldn (dB(A)) 59.3

Standard (dB(A)) 70 115

Reference Method : ISO 1996-1 : 2016

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.

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ภาคผนวก ค-5

ใบรับรองผลการตรวจวัดระดับเสียงในสถานประกอบการ



Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265981

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number: 3514376-1

Page 1 of 1

Sample Number 265981-1
Parameter Noise (Leq 12 hrs.)
Location MMA 1 บริเวณ Reactor Unit 2000
Measurement Date Feb 16, 2026
Measurement by Prasanmit Kueanpet

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:25 AM - 09:25 AM	80.0	81.1	79.8
09:25 AM - 10:25 AM	79.9	80.7	79.7
10:25 AM - 11:25 AM	79.9	80.7	79.7
11:25 AM - 12:25 PM	79.9	80.6	79.7
12:25 PM - 01:25 PM	80.0	80.9	79.9
01:25 PM - 02:25 PM	80.1	80.9	80.0
02:25 PM - 03:25 PM	80.4	81.1	80.2
03:25 PM - 04:25 PM	80.1	80.8	79.9
04:25 PM - 05:25 PM	79.7	80.5	79.5
05:25 PM - 06:25 PM	80.0	80.7	79.8
06:25 PM - 07:25 PM	80.2	81.0	80.0
07:25 PM - 08:25 PM	80.3	81.1	80.1

Leq Average 12 hrs. (dB(A)) 80.0
Lmax (dB(A)) 81.1
Standard (dB(A)) 87
Reference Method : ISO 1996-1 : 2016
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย
ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265981

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number: 3514377-1

Page 1 of 1

Sample Number 265981-2
Parameter Noise (Leq 12 hrs.)
Location MMA 1 บริเวณ Unit 3100A/B
Measurement Date Feb 16, 2026
Measurement by Prasanmit Kueanpet

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:30 AM - 09:30 AM	83.2	90.6	83.1
09:30 AM - 10:30 AM	83.2	85.1	83.1
10:30 AM - 11:30 AM	83.1	84.7	83.0
11:30 AM - 12:30 PM	83.1	84.4	83.0
12:30 PM - 01:30 PM	83.2	84.6	83.0
01:30 PM - 02:30 PM	83.2	83.6	83.2
02:30 PM - 03:30 PM	83.2	83.6	83.1
03:30 PM - 04:30 PM	83.1	83.5	83.1
04:30 PM - 05:30 PM	83.2	84.8	83.1
05:30 PM - 06:30 PM	83.1	90.5	83.0
06:30 PM - 07:30 PM	83.2	84.8	83.1
07:30 PM - 08:30 PM	83.1	83.5	83.0
Leq Average 12 hrs. (dB(A))	83.2		
Lmax (dB(A))		90.6	
Standard (dB(A))	87	140	
Reference Method : ISO 1996-1 : 2016			
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖			

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265981

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number: 3514378-1

Page 1 of 1

Sample Number 265981-3
Parameter Noise (Leq 12 hrs.)
Location MMA 1 บริเวณนอกอาคาร Compressor
Measurement Date Feb 16, 2026
Measurement by Prasanmit Kueanpet

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:16 AM - 09:16 AM	79.7	80.5	79.4
09:16 AM - 10:16 AM	79.7	80.6	79.3
10:16 AM - 11:16 AM	79.7	82.7	79.3
11:16 AM - 12:16 PM	79.7	83.3	79.3
12:16 PM - 01:16 PM	79.7	82.1	79.4
01:16 PM - 02:16 PM	79.8	80.5	79.5
02:16 PM - 03:16 PM	79.5	83.2	79.2
03:16 PM - 04:16 PM	79.7	83.4	79.4
04:16 PM - 05:16 PM	79.8	80.7	79.4
05:16 PM - 06:16 PM	79.8	80.6	79.5
06:16 PM - 07:16 PM	79.8	82.8	79.4
07:16 PM - 08:16 PM	79.7	80.4	79.4
Leq Average 12 hrs. (dB(A))	79.7		
Lmax (dB(A))		83.4	
Standard (dB(A))	87	140	
Reference Method : ISO 1996-1 : 2016			
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖			

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265981

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number: 3514379-1

Page 1 of 1

Sample Number 265981-4
Parameter Noise (Leq 12 hrs.)
Location MMA 1 บริเวณ Steam Header
Measurement Date Feb 16, 2026
Measurement by Prasanmit Kueanpet

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:52 AM - 09:52 AM	83.5	85.6	83.0
09:52 AM - 10:52 AM	83.0	83.8	82.6
10:52 AM - 11:52 AM	83.1	84.5	82.8
11:52 AM - 12:52 PM	83.2	84.3	82.7
12:52 PM - 01:52 PM	82.5	85.4	82.2
01:52 PM - 02:52 PM	83.6	84.3	83.3
02:52 PM - 03:52 PM	83.5	84.0	83.3
03:52 PM - 04:52 PM	83.2	83.7	83.0
04:52 PM - 05:52 PM	83.3	84.0	83.0
05:52 PM - 06:52 PM	83.2	84.6	82.9
06:52 PM - 07:52 PM	83.3	84.7	83.0
07:52 PM - 08:52 PM	83.4	85.5	82.9
Leq Average 12 hrs. (dB(A))	83.2		
Lmax (dB(A))		85.6	
Standard (dB(A))	87	140	
Reference Method : ISO 1996-1 : 2016			
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๔๖			

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271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265981

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number: 3514380-1

Page 1 of 1

Sample Number 265981-5
Parameter Noise (Leq 12 hrs.)
Location MMA 1 ชั้น 1 ใกล้บริเวณ Reboiler Pump ของ BMA#1 Unit
Measurement Date Feb 16, 2026
Measurement by Prasanmit Kueanpet

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:16 AM - 09:16 AM	76.9	86.8	74.0
09:16 AM - 10:16 AM	76.5	88.2	75.7
10:16 AM - 11:16 AM	75.9	92.6	74.5
11:16 AM - 12:16 PM	76.5	85.8	75.4
12:16 PM - 01:16 PM	76.6	81.1	76.0
01:16 PM - 02:16 PM	76.2	86.1	74.7
02:16 PM - 03:16 PM	75.2	84.0	73.9
03:16 PM - 04:16 PM	76.9	88.6	76.1
04:16 PM - 05:16 PM	76.7	86.6	75.2
05:16 PM - 06:16 PM	76.9	81.4	76.3
06:16 PM - 07:16 PM	75.7	92.4	74.3
07:16 PM - 08:16 PM	76.7	88.4	75.9
Leq Average 12 hrs. (dB(A))	76.4		
Lmax (dB(A))		92.6	
Standard (dB(A))	87	140	
Reference Method : ISO 1996-1 : 2016			
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖			

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265981

Date Received : Feb 17, 2026

Date Reported : Feb 24, 2026

Report Number: 3514381-1

Page 1 of 1

Sample Number 265981-6
Parameter Noise (Leq 12 hrs.)
Location MMA 1 ชั้น 1 ใกล้บริเวณ Reboiler Pump ของ BMA#2 Unit
Measurement Date Feb 16, 2026
Measurement by Prasanmit Kueanpet

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:12 AM - 09:12 AM	73.0	78.8	72.5
09:12 AM - 10:12 AM	73.3	82.0	72.4
10:12 AM - 11:12 AM	74.0	82.5	73.0
11:12 AM - 12:12 PM	74.0	80.3	72.8
12:12 PM - 01:12 PM	74.0	79.4	72.6
01:12 PM - 02:12 PM	72.9	80.7	72.4
02:12 PM - 03:12 PM	73.2	77.6	72.3
03:12 PM - 04:12 PM	73.1	80.9	72.6
04:12 PM - 05:12 PM	73.8	79.2	72.4
05:12 PM - 06:12 PM	73.6	79.0	72.2
06:12 PM - 07:12 PM	73.8	82.3	72.8
07:12 PM - 08:12 PM	73.0	80.8	72.5
Leq Average 12 hrs. (dB(A))	73.5		
Lmax (dB(A))		82.5	
Standard (dB(A))	87	140	
Reference Method : ISO 1996-1 : 2016			
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖			

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265981

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number: 3514382-1

Page 1 of 1

Sample Number 265981-7
Parameter Noise (Leq 12 hrs.)
Location MMA 2 บริเวณ Reactor Unit 2000
Measurement Date Feb 16, 2026
Measurement by Prasanmit Kueanpet

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:00 AM - 09:00 AM	83.0	86.6	81.6
09:00 AM - 10:00 AM	82.7	86.6	81.3
10:00 AM - 11:00 AM	82.5	85.6	81.3
11:00 AM - 12:00 PM	82.6	85.2	81.4
12:00 PM - 01:00 PM	82.6	85.1	81.4
01:00 PM - 02:00 PM	82.7	86.1	81.4
02:00 PM - 03:00 PM	83.1	86.0	81.7
03:00 PM - 04:00 PM	83.6	86.3	82.1
04:00 PM - 05:00 PM	82.8	85.9	81.6
05:00 PM - 06:00 PM	82.6	86.5	81.2
06:00 PM - 07:00 PM	82.9	86.5	81.5
07:00 PM - 08:00 PM	82.7	85.8	81.5

Leq Average 12 hrs. (dB(A)) 82.8
Lmax (dB(A)) 86.6
Standard (dB(A)) 87
Reference Method : ISO 1996-1 : 2016
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย
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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265981

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number: 3514383-1

Page 1 of 1

Sample Number 265981-8
Parameter Noise (Leq 12 hrs.)
Location MMA 2 บริเวณ Unit 3100A/B
Measurement Date Feb 16, 2026
Measurement by Prasanmit Kueanpet

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:46 AM - 09:46 AM	80.9	84.7	80.3
09:46 AM - 10:46 AM	80.8	86.1	80.1
10:46 AM - 11:46 AM	80.7	84.5	80.0
11:46 AM - 12:46 PM	80.7	84.5	80.1
12:46 PM - 01:46 PM	80.8	84.8	80.2
01:46 PM - 02:46 PM	80.7	83.1	80.3
02:46 PM - 03:46 PM	80.7	86.1	80.3
03:46 PM - 04:46 PM	80.7	82.2	80.3
04:46 PM - 05:46 PM	80.7	84.5	80.1
05:46 PM - 06:46 PM	80.7	86.0	80.0
06:46 PM - 07:46 PM	80.7	84.7	80.1
07:46 PM - 08:46 PM	80.7	84.7	80.1
Leq Average 12 hrs. (dB(A))	80.7		
Lmax (dB(A))		86.1	
Standard (dB(A))	87	140	
Reference Method : ISO 1996-1 : 2016			
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖			

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P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265981

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number: 3514384-1

Page 1 of 1

Sample Number 265981-9
Parameter Noise (Leq 12 hrs.)
Location MMA 2 บริเวณอาคาร Compressor
Measurement Date Feb 16, 2026
Measurement by Prasanmit Kueanpet

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:24 AM - 09:24 AM	83.1	90.5	81.2
09:24 AM - 10:24 AM	82.8	87.5	81.4
10:24 AM - 11:24 AM	82.6	88.9	81.0
11:24 AM - 12:24 PM	82.0	86.4	80.8
12:24 PM - 01:24 PM	82.4	87.6	80.9
01:24 PM - 02:24 PM	82.0	87.3	80.9
02:24 PM - 03:24 PM	81.9	86.3	80.9
03:24 PM - 04:24 PM	83.2	87.9	81.4
04:24 PM - 05:24 PM	82.1	86.5	81.1
05:24 PM - 06:24 PM	82.6	87.3	81.2
06:24 PM - 07:24 PM	82.7	89.0	81.1
07:24 PM - 08:24 PM	82.3	87.5	80.8
Leq Average 12 hrs. (dB(A))	82.5		
Lmax (dB(A))		90.5	
Standard (dB(A))	87	140	
Reference Method : ISO 1996-1 : 2016			
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖			

Technical Management

Chontichak

Chonticha Subongkoch
Scientist (3)

Approved by

Supot S

Supot Salamteh
Section Head

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265981

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number: 3514386-1

Page 1 of 1

Sample Number 265981-11
Parameter Noise (Leq 12 hrs.)
Location MMA 2 ในอาคาร Ware House
Measurement Date Feb 16, 2026
Measurement by Prasanmit Kueanpet

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:04 AM - 09:04 AM	81.5	83.5	81.2
09:04 AM - 10:04 AM	81.4	83.3	81.0
10:04 AM - 11:04 AM	81.4	83.3	80.9
11:04 AM - 12:04 PM	81.6	84.5	81.0
12:04 PM - 01:04 PM	81.4	83.1	80.9
01:04 PM - 02:04 PM	81.4	83.2	80.9
02:04 PM - 03:04 PM	81.5	83.4	81.0
03:04 PM - 04:04 PM	81.6	83.4	81.3
04:04 PM - 05:04 PM	81.4	83.4	81.1
05:04 PM - 06:04 PM	81.3	83.2	80.9
06:04 PM - 07:04 PM	81.3	84.2	80.7
07:04 PM - 08:04 PM	81.3	83.0	80.8
Leq Average 12 hrs. (dB(A))	81.4		
Lmax (dB(A))		84.5	
Standard (dB(A))	87	140	
Reference Method : ISO 1996-1 : 2016			
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖			

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location : MMA Site 3

Lot ID: 2617691

Date Received : Feb 27, 2026

Date Reported : Mar 05, 2026

Report Number: 3515477-1

Page 1 of 1

Sample Number 2617691-1
Parameter Noise (Leq. 12 hrs.)
Location MMA 2 บริเวณ Steam Header
Measurement Date Feb 26, 2026
Measurement by Santi Chaichana

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
07:04 PM - 08:04 PM	84.6	86.1	82.9
08:04 PM - 09:04 PM	84.6	86.1	83.0
09:04 PM - 10:04 PM	84.9	86.3	83.2
10:04 PM - 11:04 PM	84.7	86.1	83.1
11:04 PM - 12:04 AM	85.0	86.3	83.3
12:04 AM - 01:04 AM	85.0	86.4	83.2
01:04 AM - 02:04 AM	84.8	86.2	83.0
02:04 AM - 03:04 AM	85.1	86.4	83.3
03:04 AM - 04:04 AM	85.2	86.6	83.5
04:04 AM - 05:04 AM	85.3	86.5	83.5
05:04 AM - 06:04 AM	85.0	86.6	83.6
06:04 AM - 07:04 AM	85.3	86.5	83.5

Leq Average 12 hrs. (dB(A))

85.0

Lmax (dB(A))

86.6

Standard (dB(A))

87

140

Reference Method : ISO 1996-1 : 2016

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัย

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Technical Management

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Supot S

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ภาคผนวก ค-6

ใบรับรองผลการตรวจวัดระดับเสียงที่พนักงานได้รับเฉลี่ยตลอดเวลาทำงาน (TWA)



Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265985

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number : 3491674-1

Page 1 of 8

Sample Number 265985-1
Sampled Date Feb 16, 2026
Sample Description Noise Dose
Location Field #1000 M1
Personal Sampling คุณอนุชา ไชยกันทะ
Date Analysis Commenced Feb 18, 2026

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	%	-	1	56.2	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
Noise Dose (8 hrs.)	07:00 AM - 07:00 PM	%	-	1	52.5	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	dB(A)	-	-	80.5	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (8 hrs.)	07:00 AM - 07:00 PM	dB(A)	-	-	82.2	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong

Guideline :

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

Sampled By : Chanon Booncheun

Remark :

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

Approved by

Supot Salamteh
Section Head

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265985

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number : 3491674-1

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Sample Number 265985-2
Sampled Date Feb 16, 2026
Sample Description Noise Dose
Location Field #2-3000 M1
Personal Sampling คุณยงยุทธ คำสีอมี
Date Analysis Commenced Feb 18, 2026

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	%	-	1	33.1	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
Noise Dose (8 hrs.)	07:00 AM - 07:00 PM	%	-	1	30.9	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	dB(A)	-	-	78.2	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (8 hrs.)	07:00 AM - 07:00 PM	dB(A)	-	-	79.9	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong

Guideline :

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

Sampled By : Chanon Booncheun

Remark :

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

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Supot Salamteh
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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265985

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number : 3491674-1

Page 3 of 8

Sample Number 265985-3
Sampled Date Feb 16, 2026
Sample Description Noise Dose
Location Field #4,5000 M1
Personal Sampling คุณณัฐวัฒน์ พรหมจันทร์
Date Analysis Commenced Feb 18, 2026

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	%	-	1	33.1	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
Noise Dose (8 hrs.)	07:00 AM - 07:00 PM	%	-	1	30.9	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	dB(A)	-	-	78.2	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (8 hrs.)	07:00 AM - 07:00 PM	dB(A)	-	-	79.9	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong

Guideline :

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

Sampled By : Chanon Booncheun

Remark :

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

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265985

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number : 3491674-1

Page 4 of 8

Sample Number 265985-4
Sampled Date Feb 16, 2026
Sample Description Noise Dose
Location Field #1000 M2
Personal Sampling คุณบารมี ทวีคุณ
Date Analysis Commenced Feb 18, 2026

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	%	-	1	39.8	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
Noise Dose (8 hrs.)	07:00 AM - 07:00 PM	%	-	1	37.2	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	dB(A)	-	-	79.0	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (8 hrs.)	07:00 AM - 07:00 PM	dB(A)	-	-	80.7	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong

Guideline :

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

Sampled By : Chanon Booncheun

Remark :

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

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Section Head

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265985

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number : 3491674-1

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Sample Number 265985-5
Sampled Date Feb 16, 2026
Sample Description Noise Dose
Location Field #2-3000 M2
Personal Sampling คุณณณทิพย์ ศรีอ่อน
Date Analysis Commenced Feb 18, 2026

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	%	-	1	81.3	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
Noise Dose (8 hrs.)	07:00 AM - 07:00 PM	%	-	1	75.9	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	dB(A)	-	-	82.1	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (8 hrs.)	07:00 AM - 07:00 PM	dB(A)	-	-	83.8	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong

Guideline :

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

Sampled By : Chanon Booncheun

Remark :

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

Approved by

Supot S.

Supot Salamteh
Section Head

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265985

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number : 3491674-1

Page 6 of 8

Sample Number 265985-6
Sampled Date Feb 16, 2026
Sample Description Noise Dose
Location Field #4,5000 M2
Personal Sampling คุณคุณากร การหมั่นดี
Date Analysis Commenced Feb 18, 2026

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	%	-	1	27.5	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
Noise Dose (8 hrs.)	07:00 AM - 07:00 PM	%	-	1	25.7	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	dB(A)	-	-	77.4	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (8 hrs.)	07:00 AM - 07:00 PM	dB(A)	-	-	79.1	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong

Guideline :

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

Sampled By : Chanon Booncheun

Remark :

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

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265985

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number : 3491674-1

Page 7 of 8

Sample Number 265985-7
Sampled Date Feb 16, 2026
Sample Description Noise Dose
Location MAA 1-2 (M2)
Personal Sampling คุณโยธิน ดุพิลา
Date Analysis Commenced Feb 18, 2026

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	%	-	1	4.7	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
Noise Dose (8 hrs.)	07:00 AM - 07:00 PM	%	-	1	4.4	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	dB(A)	-	-	69.7	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (8 hrs.)	07:00 AM - 07:00 PM	dB(A)	-	-	71.4	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong

Guideline :

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

Sampled By : Chanon Booncheun

Remark :

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

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265985

Date Received : Feb 17, 2026
Date Reported : Feb 24, 2026
Report Number : 3491674-1

Page 8 of 8

Sample Number 265985-8
Sampled Date Feb 16, 2026
Sample Description Noise Dose
Location BMA 1-2 (M1)
Personal Sampling คุณองศรีกรร แก้วหอม
Date Analysis Commenced Feb 18, 2026

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	%	-	1	50.1	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
Noise Dose (8 hrs.)	07:00 AM - 07:00 PM	%	-	1	46.8	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	dB(A)	-	-	80.0	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong
TWA (8 hrs.)	07:00 AM - 07:00 PM	dB(A)	-	-	81.7	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Rayong

Guideline :

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

Sampled By : Chanon Booncheun

Remark :

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

Approved by

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Section Head

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ภาคผนวก ค-7

ใบรับรองผลการตรวจวัดเส้นระดับเสียง (Noise Contour Map)



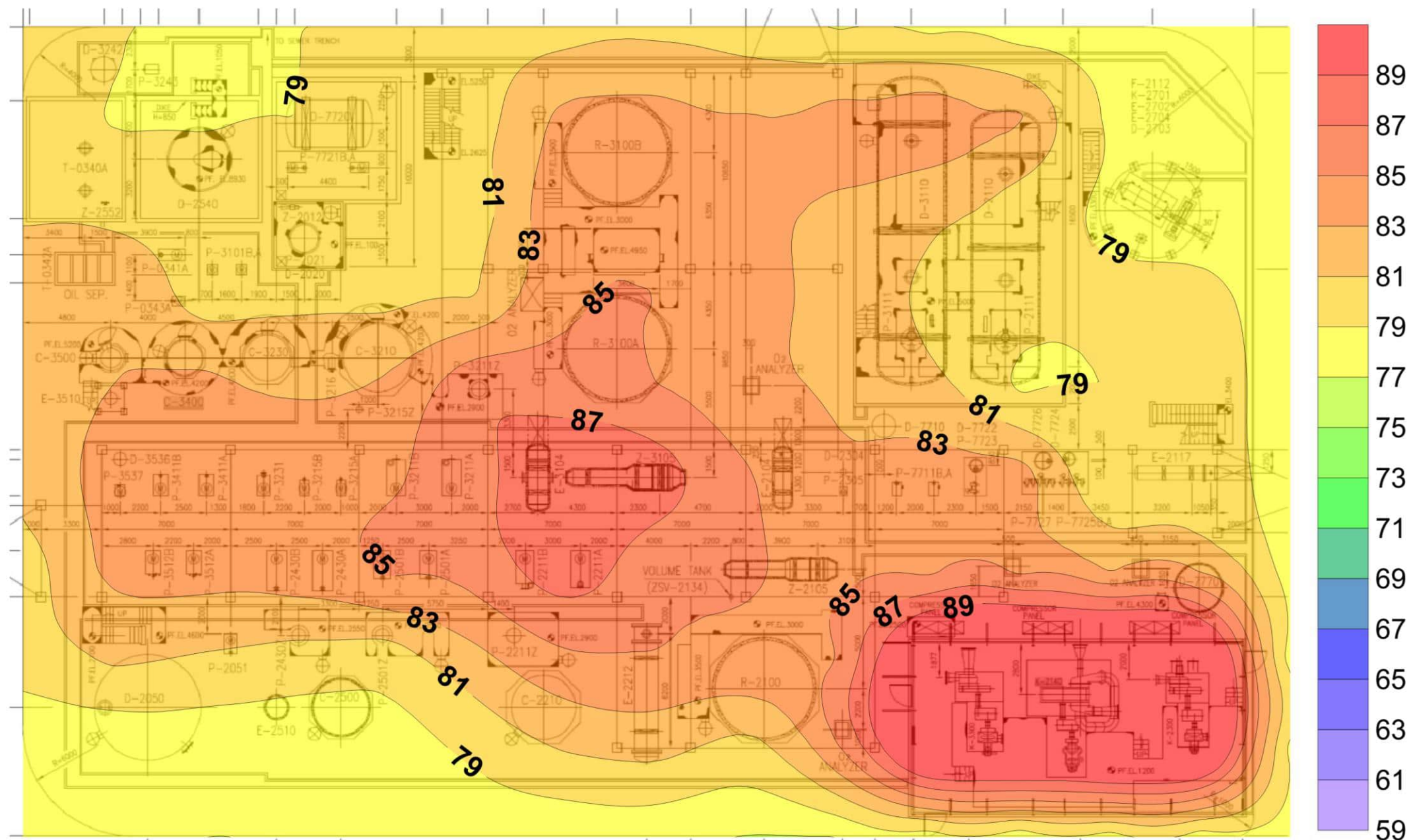
Noise Contour Map

THAI MMA Co., Ltd.

Reference Number : Lot 2432084-1

Measurement Date : Apr 29, 2024

#2000-#3000 Oxidation Unit M1 FL.1



ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250, Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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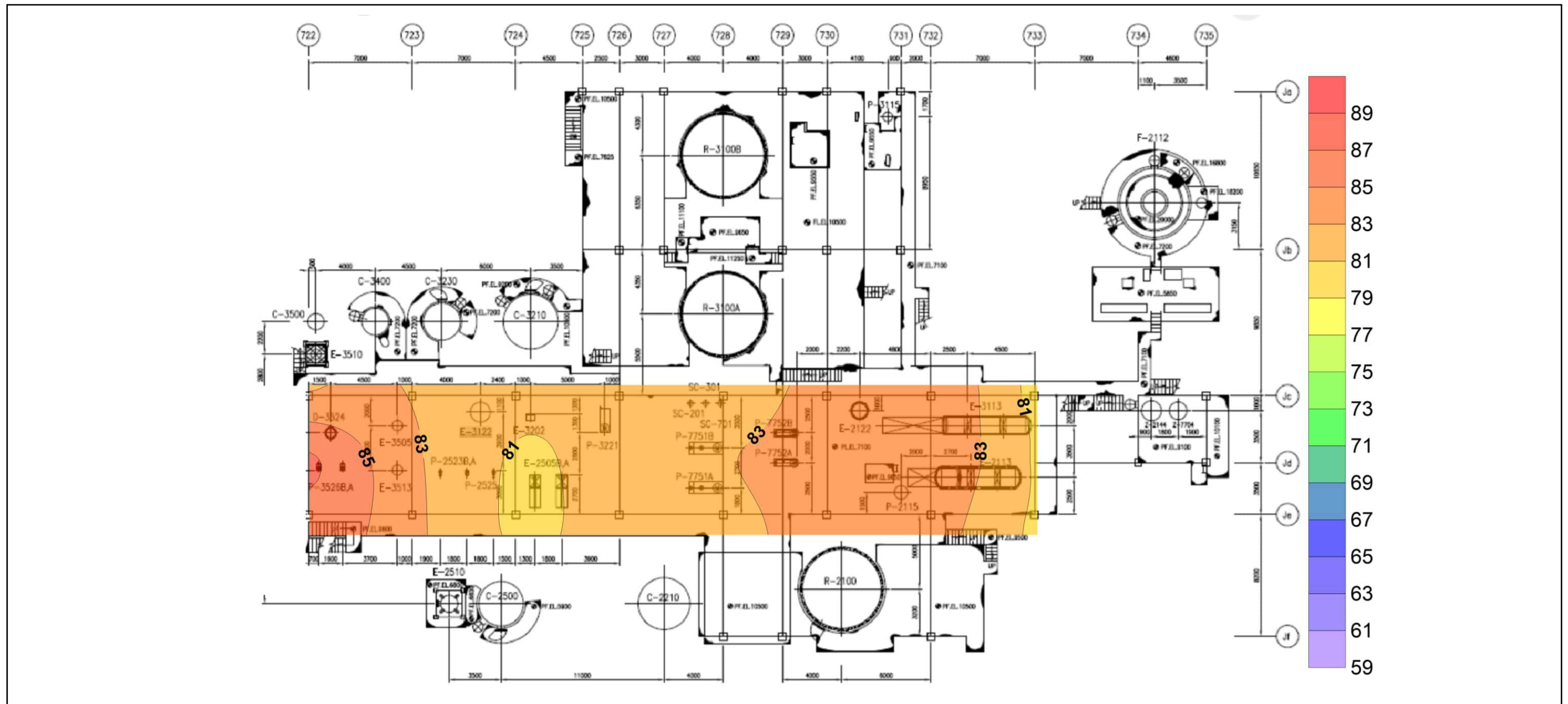
Noise Contour Map

THAI MMA Co., Ltd.

Reference Number : Lot 2432084-1

Measurement Date : Apr 29, 2024

#2000-#3000 Oxidation Unit M1 FL.2



ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250, Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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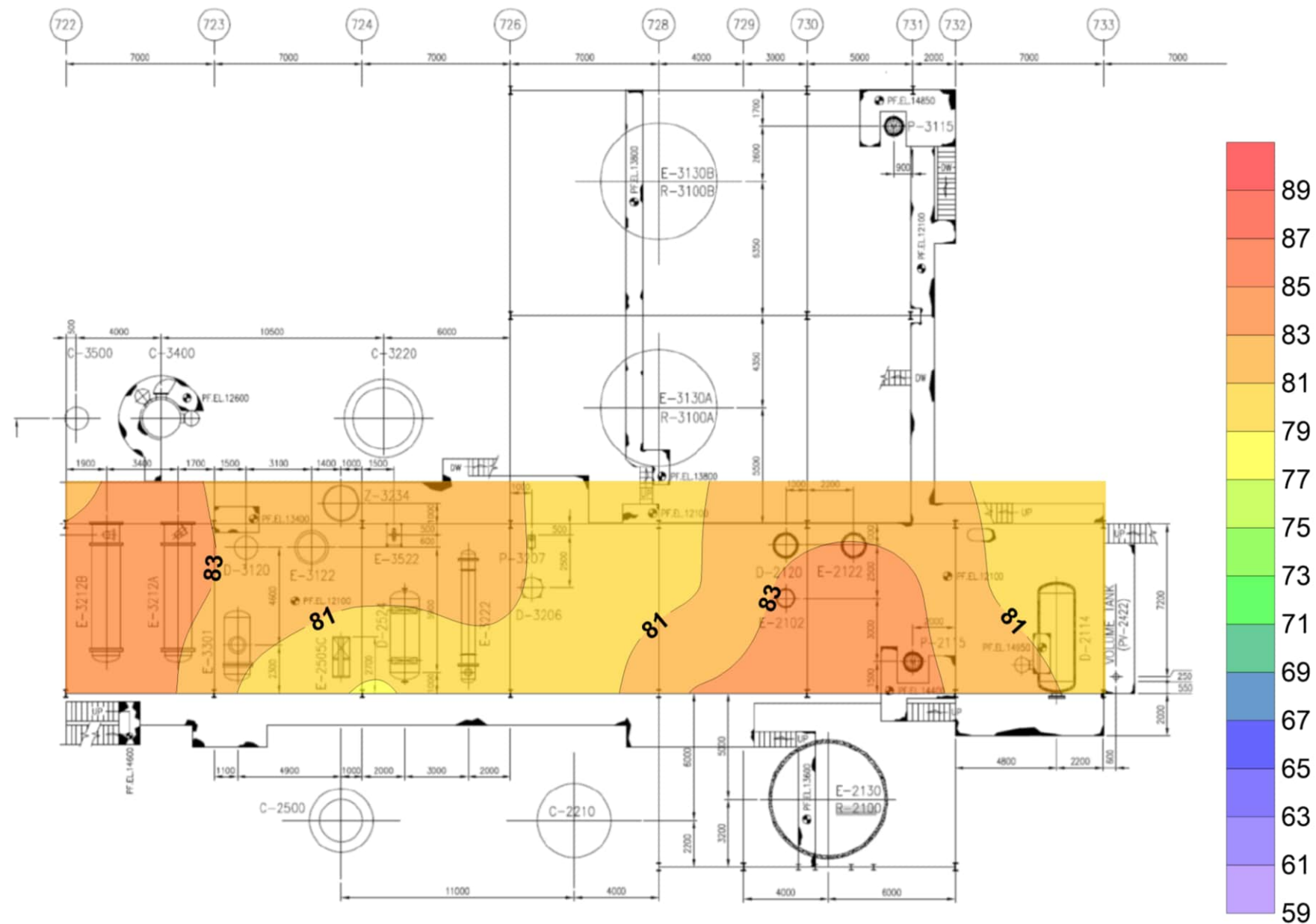
Noise Contour Map

THAI MMA Co., Ltd.

Reference Number : Lot 2432084-1

Measurement Date : Apr 29, 2024

#2000-#3000 Oxidation Unit M1 FL.3



ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250, Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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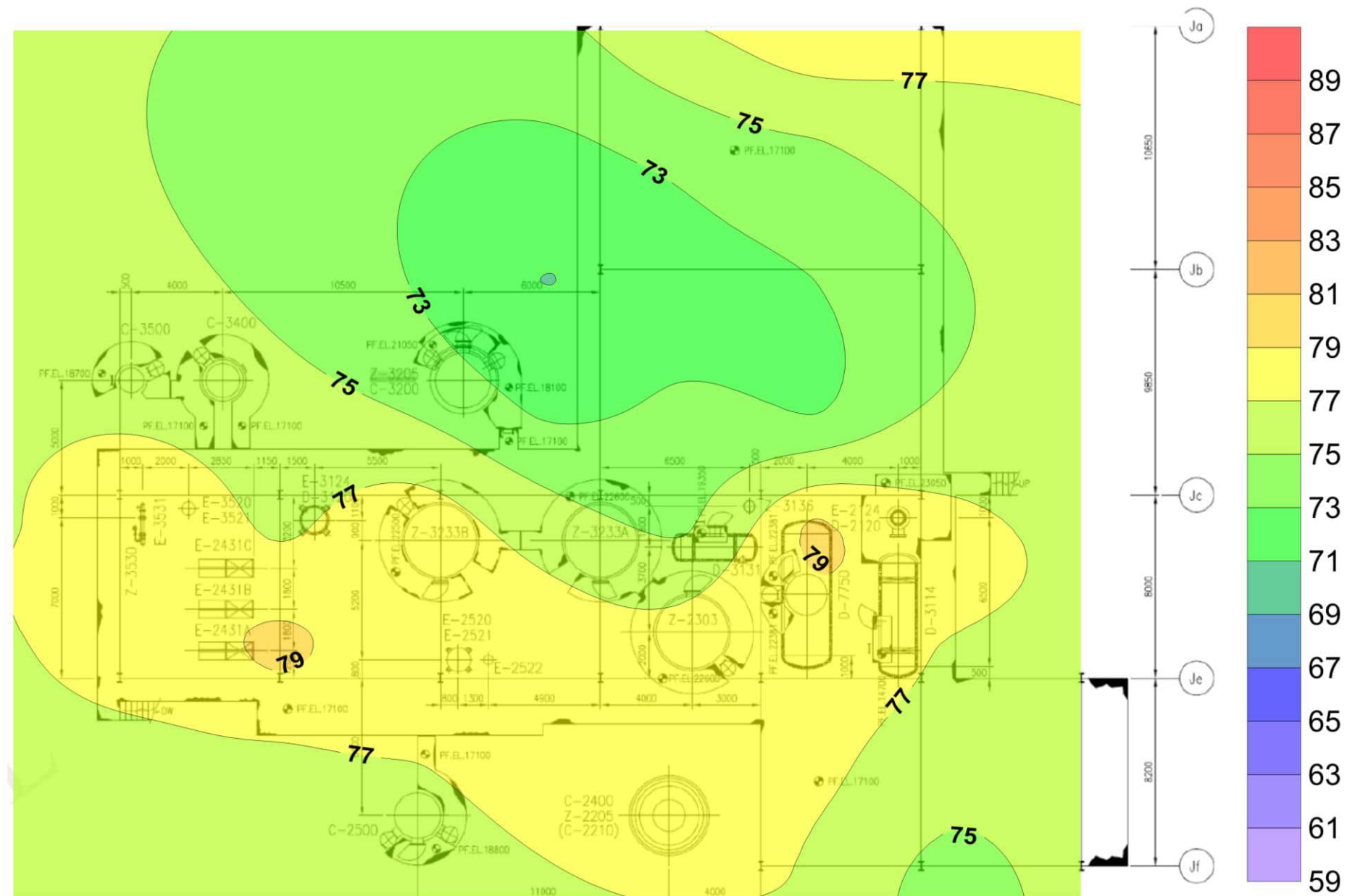
Noise Contour Map

THAI MMA Co., Ltd.

#2000-#3000 Oxidation Unit M1 FL.4

Reference Number : Lot 2432084-1

Measurement Date : Apr 29, 2024



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Reference Number : Lot 2432084-1

Measurement Date : Apr 29, 2024

#4000-#5000 MMA Recovery, Esterification Inhibitor Unit M1 FL.1



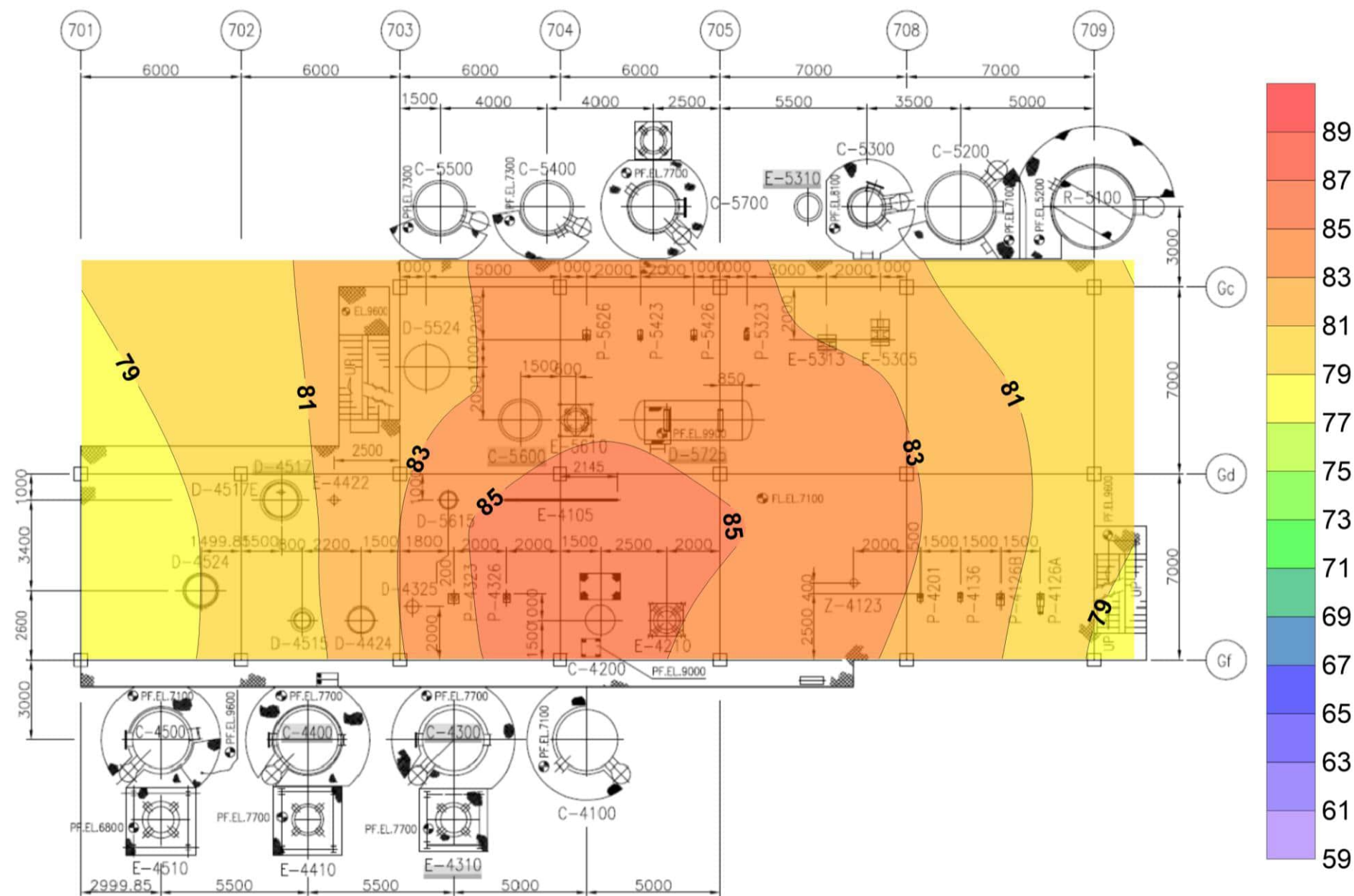
Noise Contour Map

THAI MMA Co., Ltd.

Reference Number : Lot 2432084-1

Measurement Date : Apr 29, 2024

#4000-#5000 MMA Recovery, Esterification Inhibitor Unit M1 FL.2



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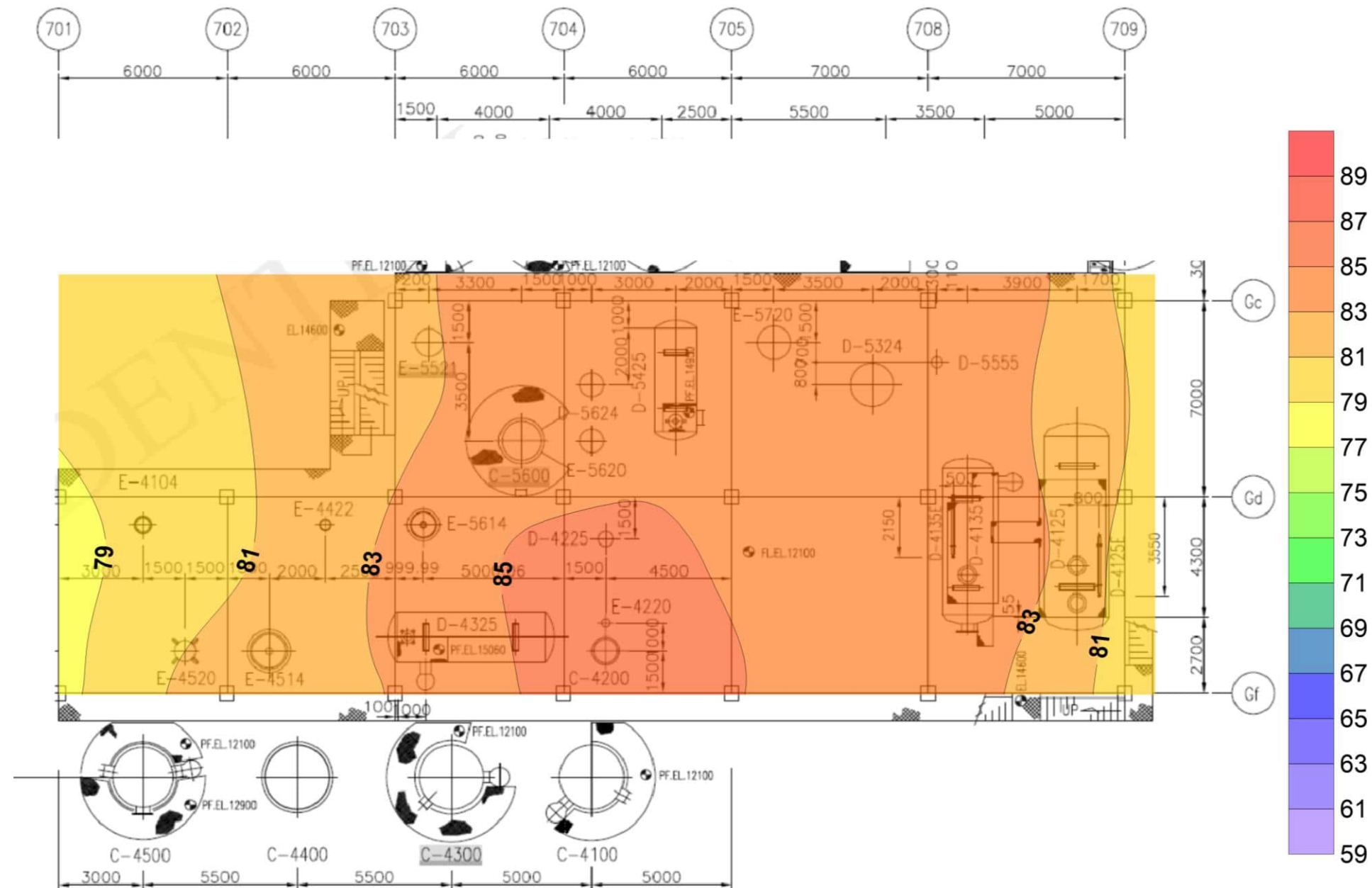
Noise Contour Map

THAI MMA Co., Ltd.

Reference Number : Lot 2432084-1

Measurement Date : Apr 29, 2024

#4000-#5000 MMA Recovery, Esterification Inhibitor Unit M1 FL.3



ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250, Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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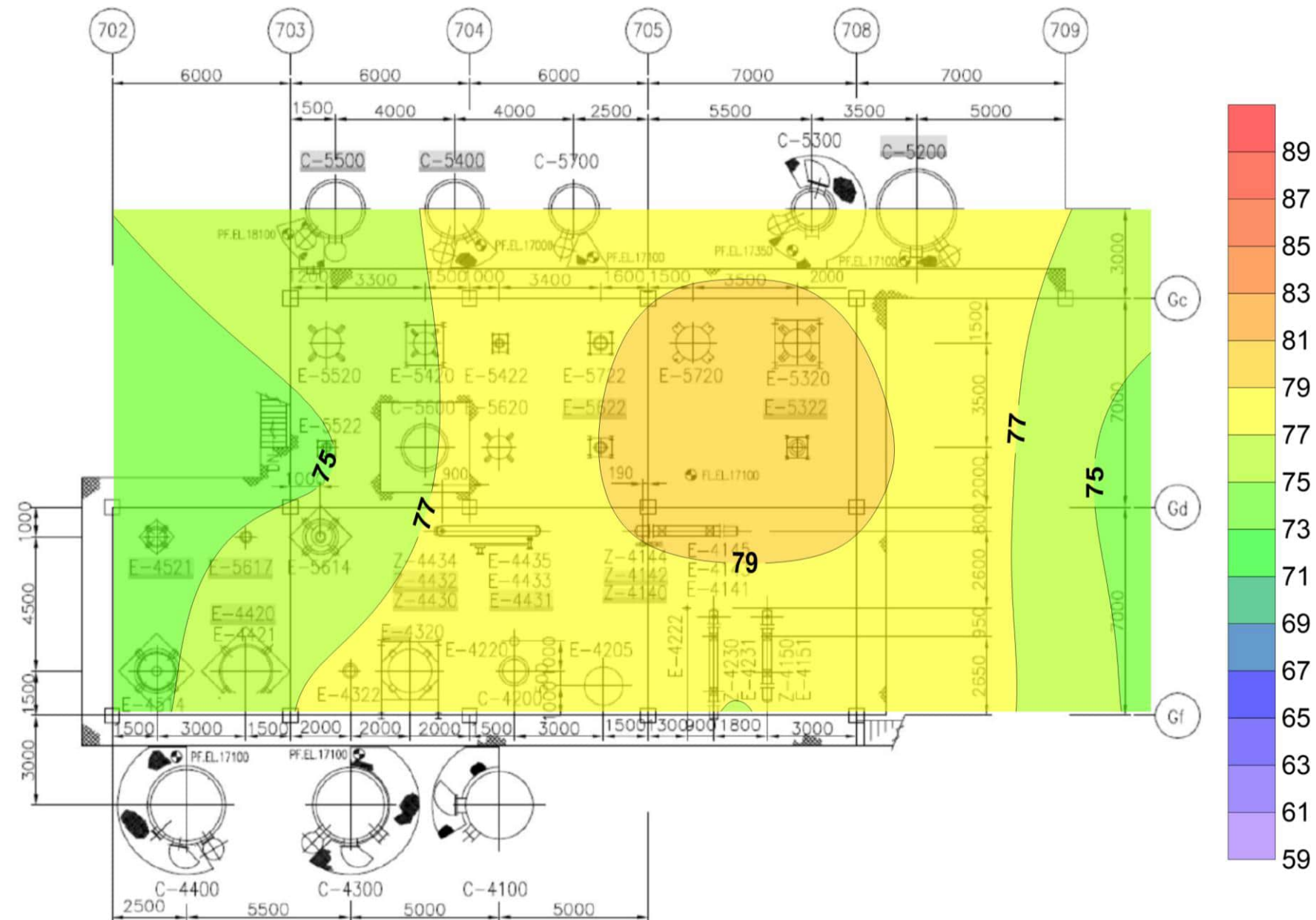
Noise Contour Map

THAI MMA Co., Ltd.

Reference Number : Lot 2432084-1

Measurement Date : Apr 29, 2024

#4000-#5000 MMA Recovery, Esterification Inhibitor Unit M1 FL.4



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ALS LABORATORY GROUP (THAILAND) CO., LTD. Part of the ALS Group



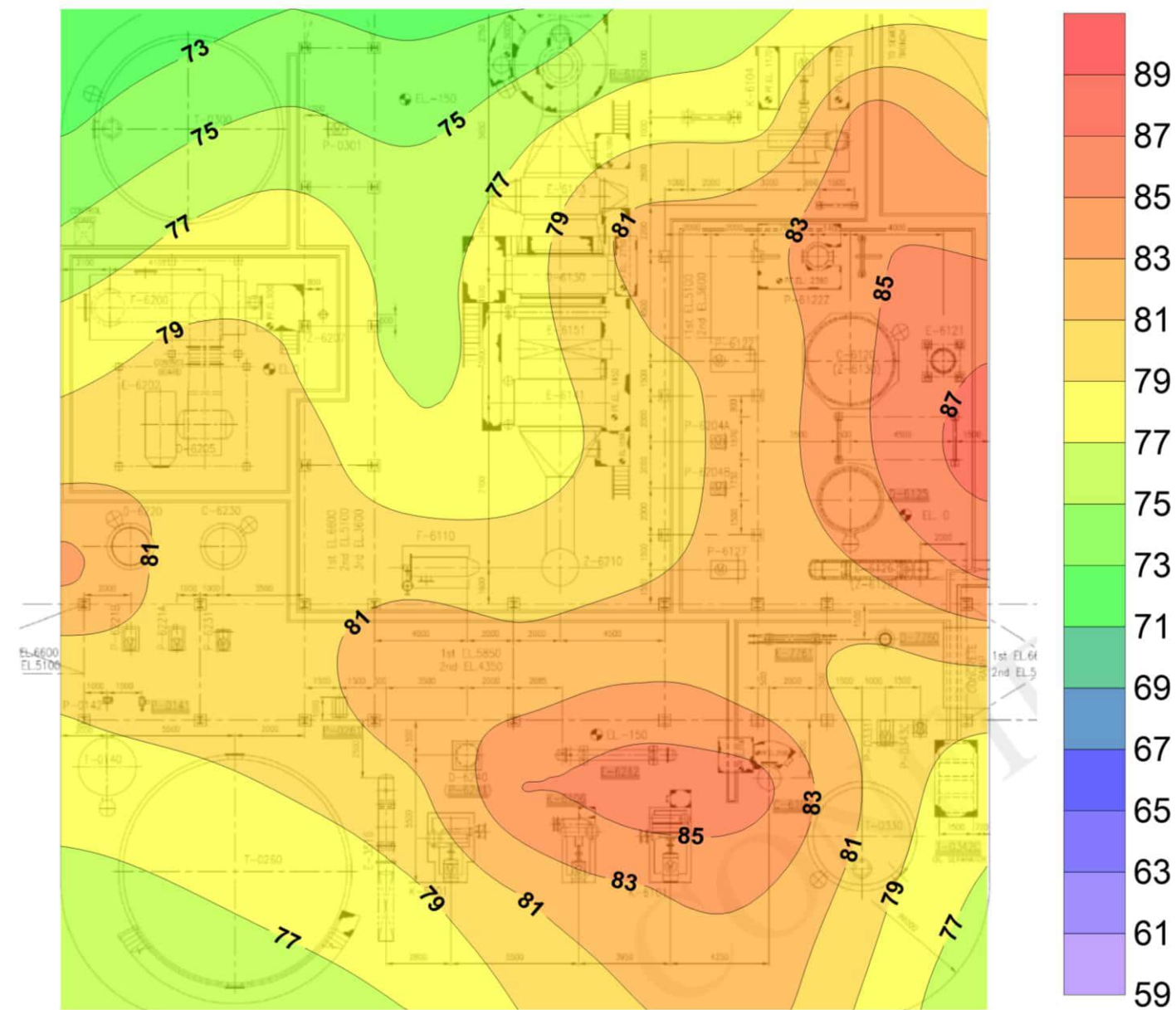
Noise Contour Map

THAI MMA Co., Ltd.

#6000 Waste and Disposal M1

Reference Number : Lot 2432084-1

Measurement Date : Apr 29, 2024



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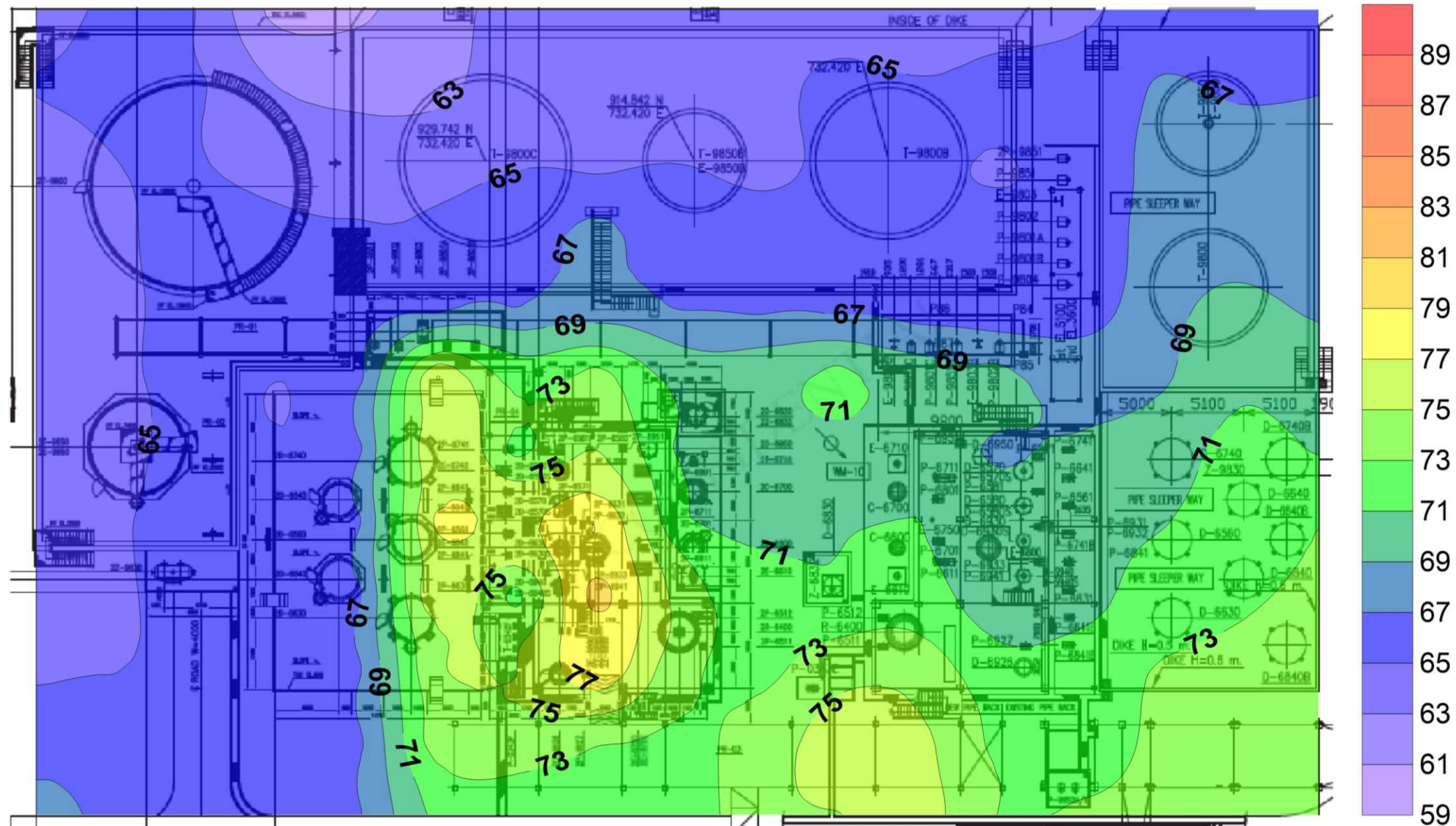
Noise Contour Map

THAI MMA Co., Ltd.

BMA#1,2 Unit M1

Reference Number : Lot 2432084-1

Measurement Date : Apr 29, 2024



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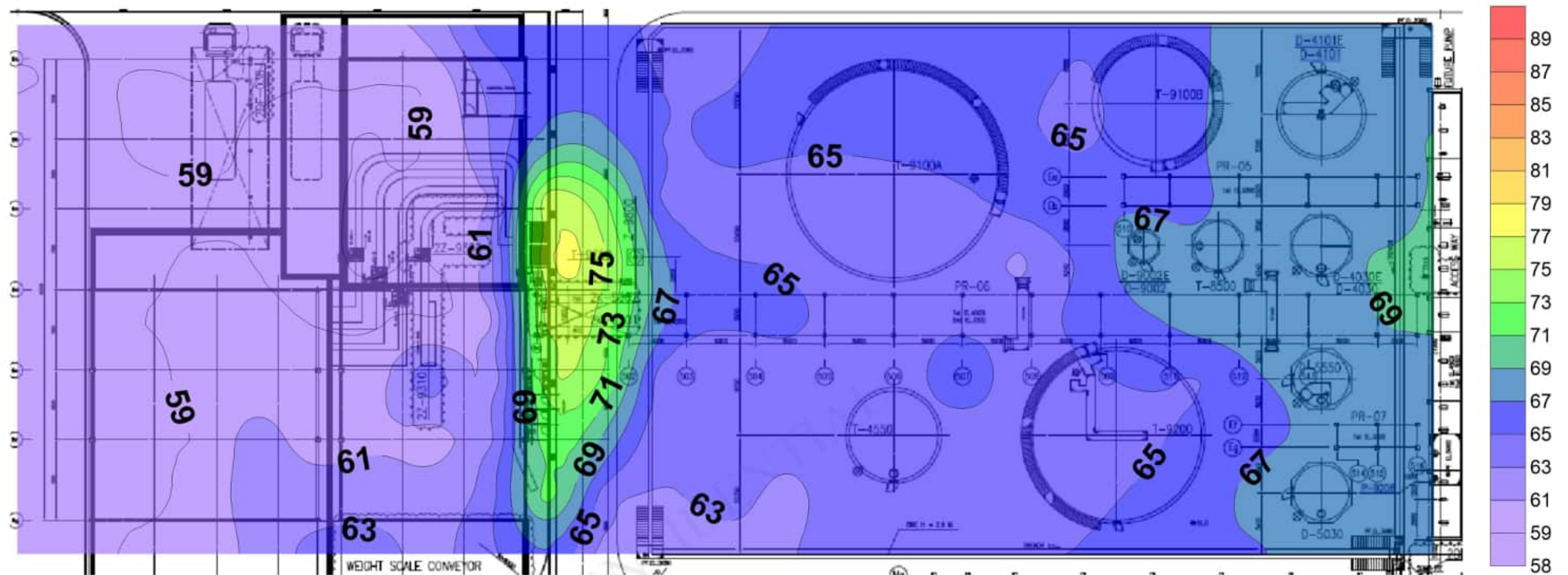
Noise Contour Map

THAI MMA Co., Ltd.

Tank and Product Loading

Reference Number : Lot 2432084-1

Measurement Date : Apr 29, 2024



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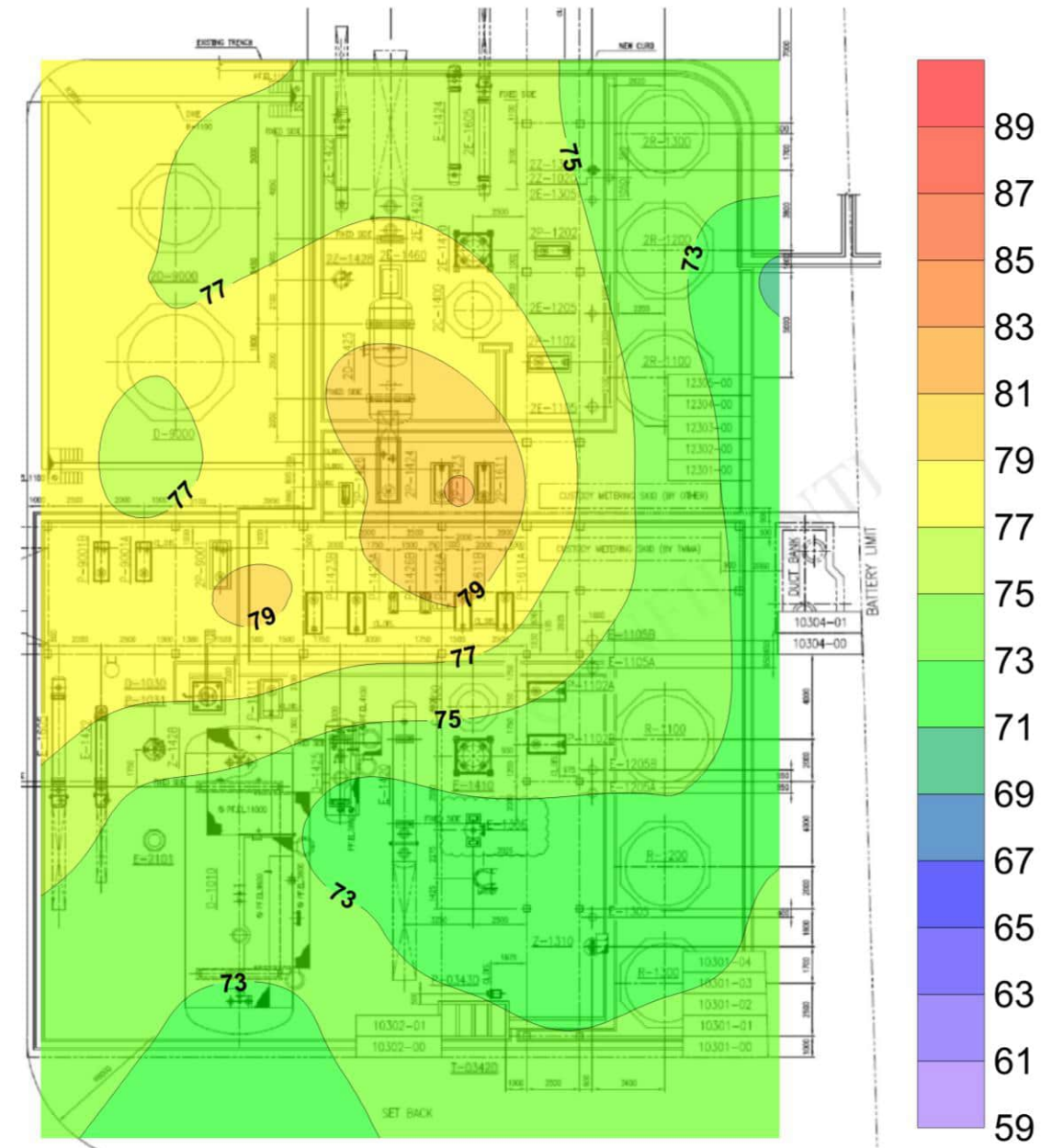
Noise Contour Map

THAI MMA Co., Ltd.

TBA M1 #1000 Unit

Reference Number : Lot 2432084-1

Measurement Date : Apr 29, 2024



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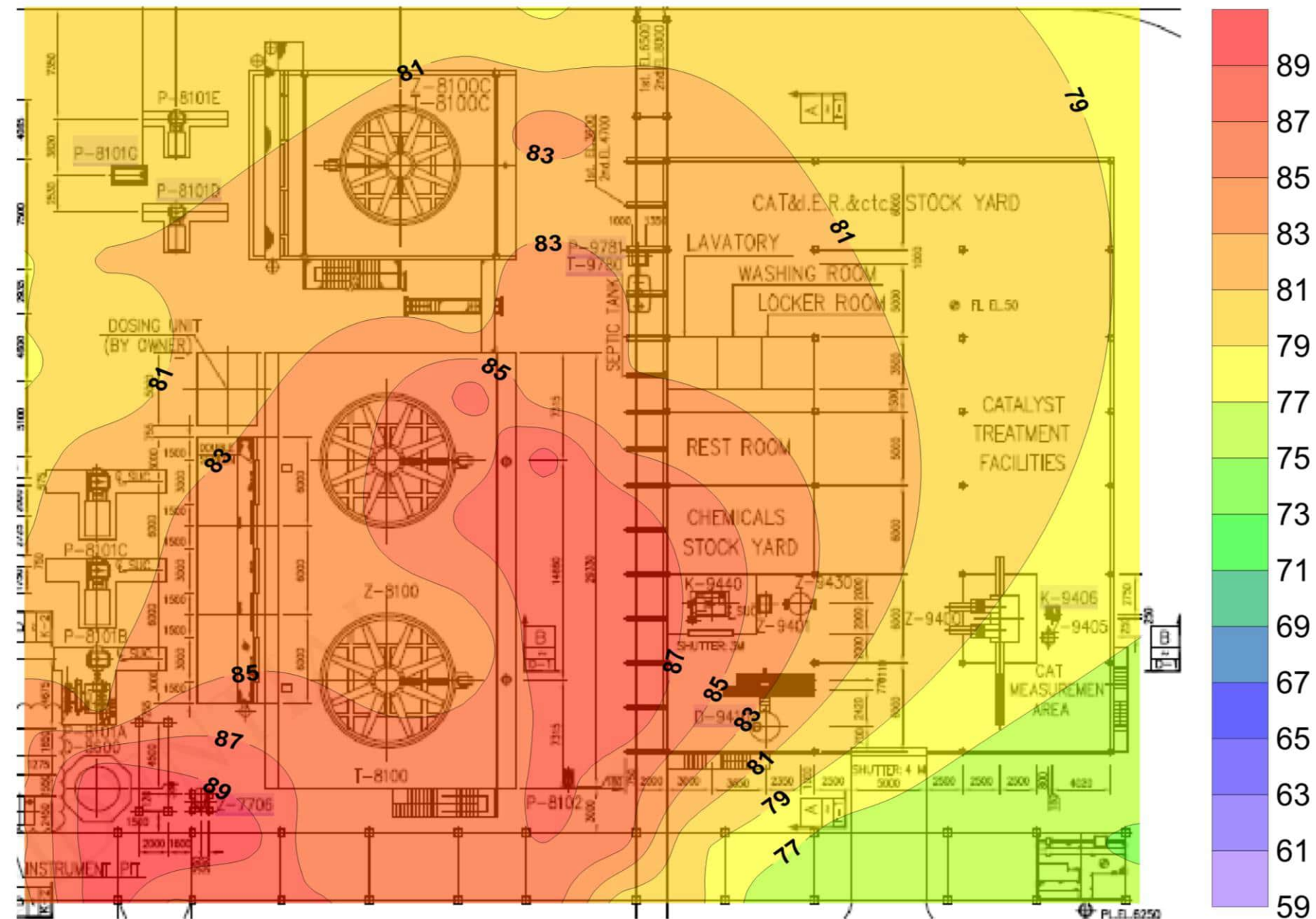
Noise Contour Map

THAI MMA Co., Ltd.

UT1 Cooling Tower M1

Reference Number : Lot 2432084-1

Measurement Date : Apr 29, 2024



ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250, Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
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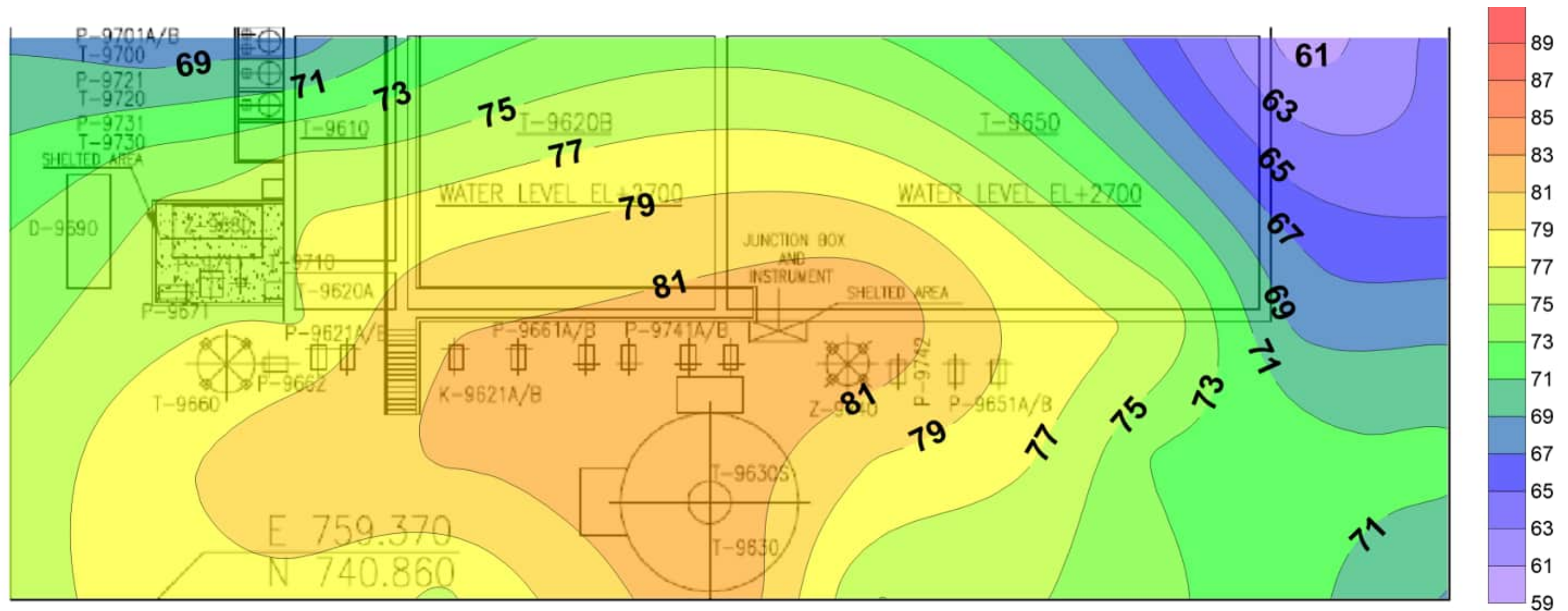
Noise Contour Map

THAI MMA Co., Ltd.

UT1 Waste Water M1

Reference Number : Lot 2432084-1

Measurement Date : Apr 29, 2024



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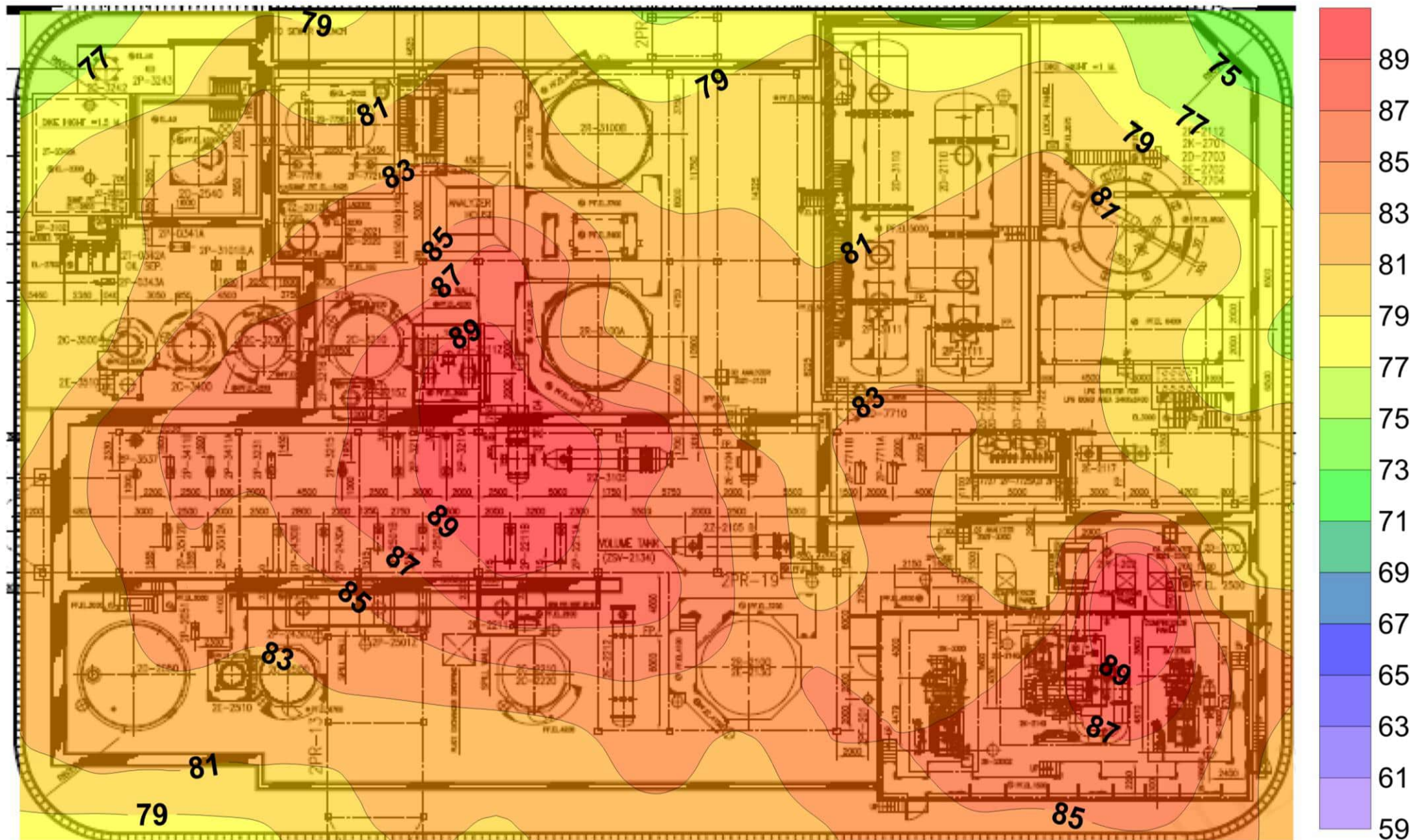
Noise Contour Map

THAI MMA Co., Ltd.

Reference Number : Lot 2432088-1

Measurement Date : Apr 30, 2024

#2000-#3000 Oxidation Unit M2 FL.1



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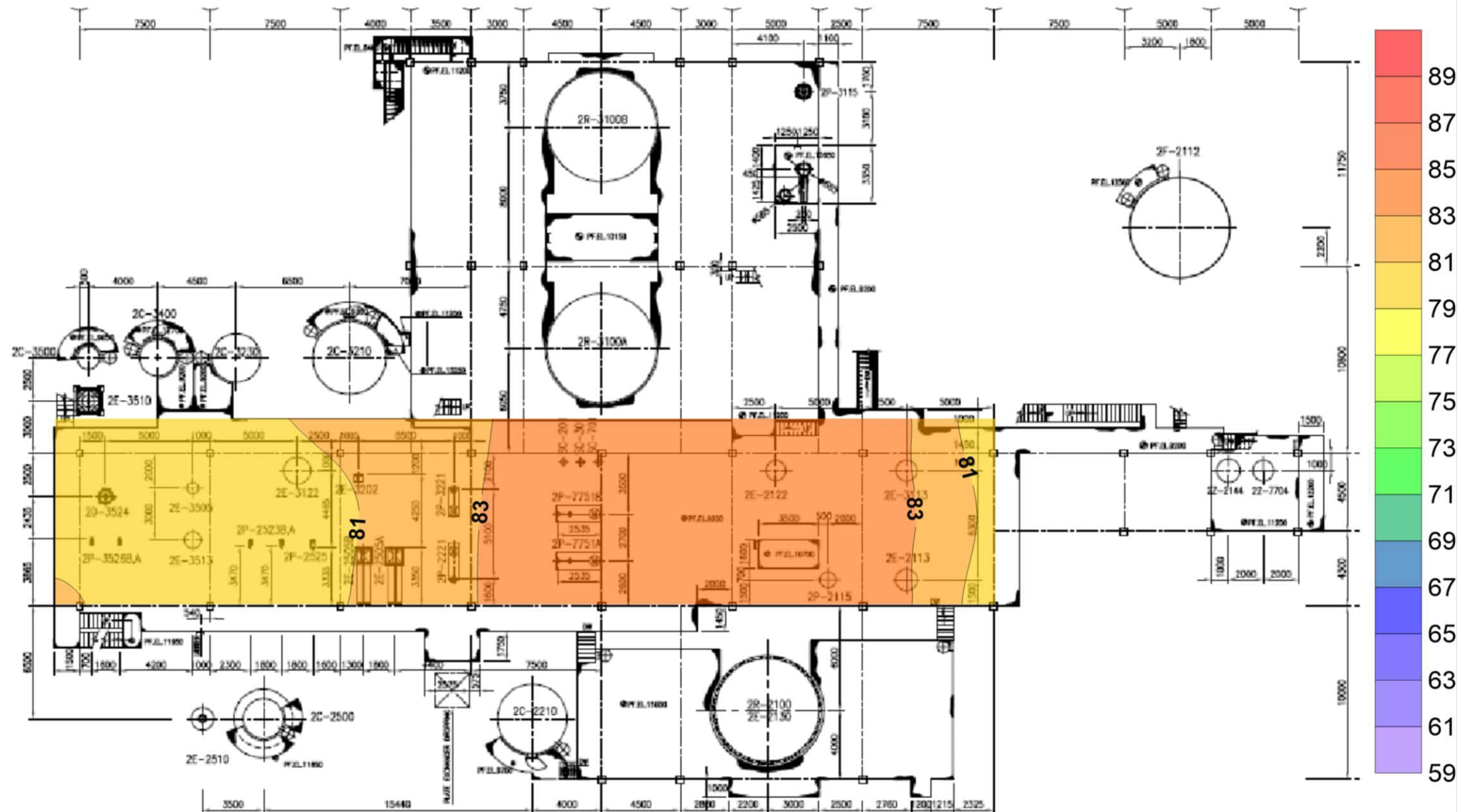
Noise Contour Map

THAI MMA Co., Ltd.

Reference Number : Lot 2432088-1

Measurement Date : Apr 30, 2024

#2000-#3000 Oxidation Unit M2 FL.2



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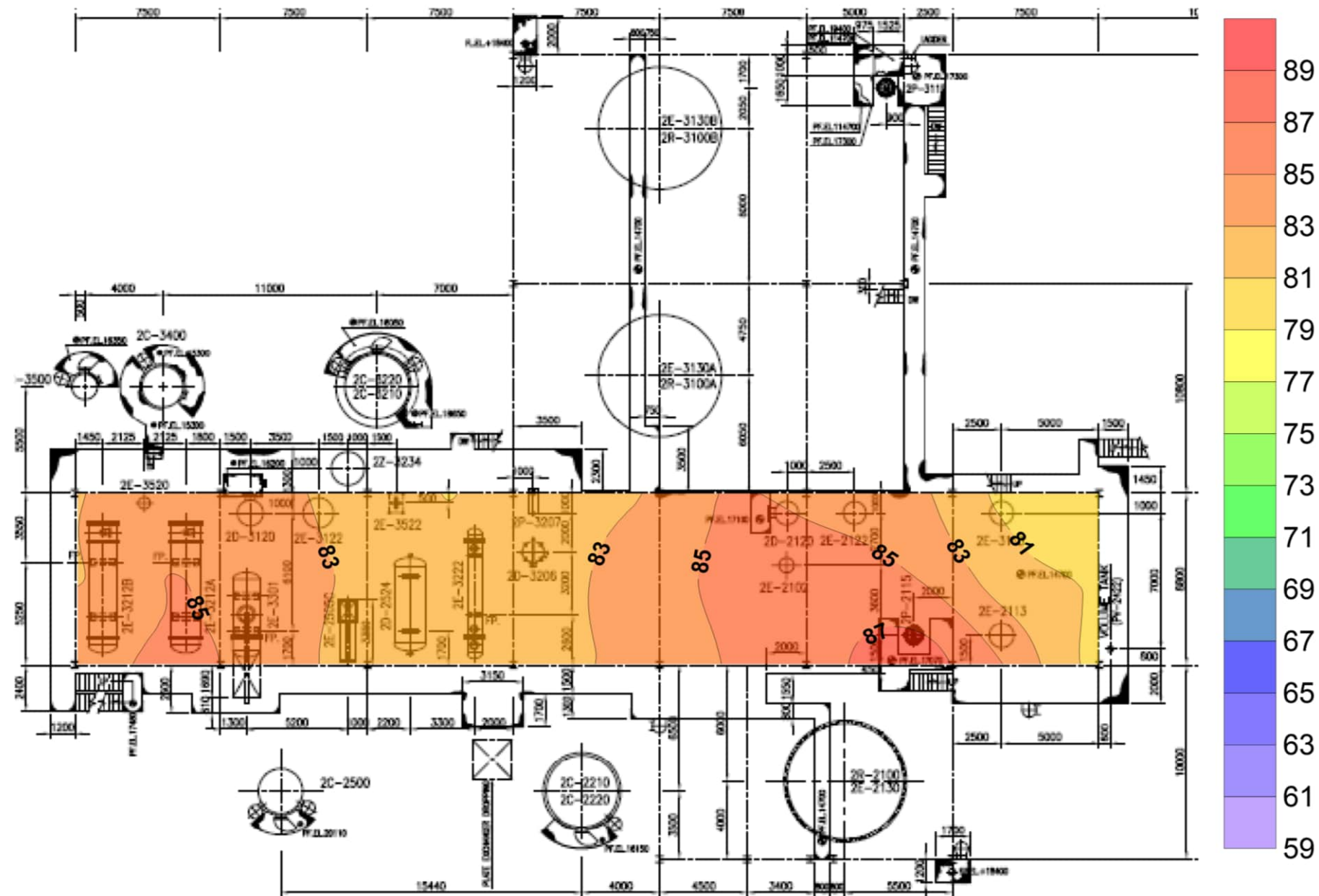
Noise Contour Map

THAI MMA Co., Ltd.

#2000-#3000 Oxidation Unit M2 FL.3

Reference Number : Lot 2432088-1

Measurement Date : Apr 30, 2024



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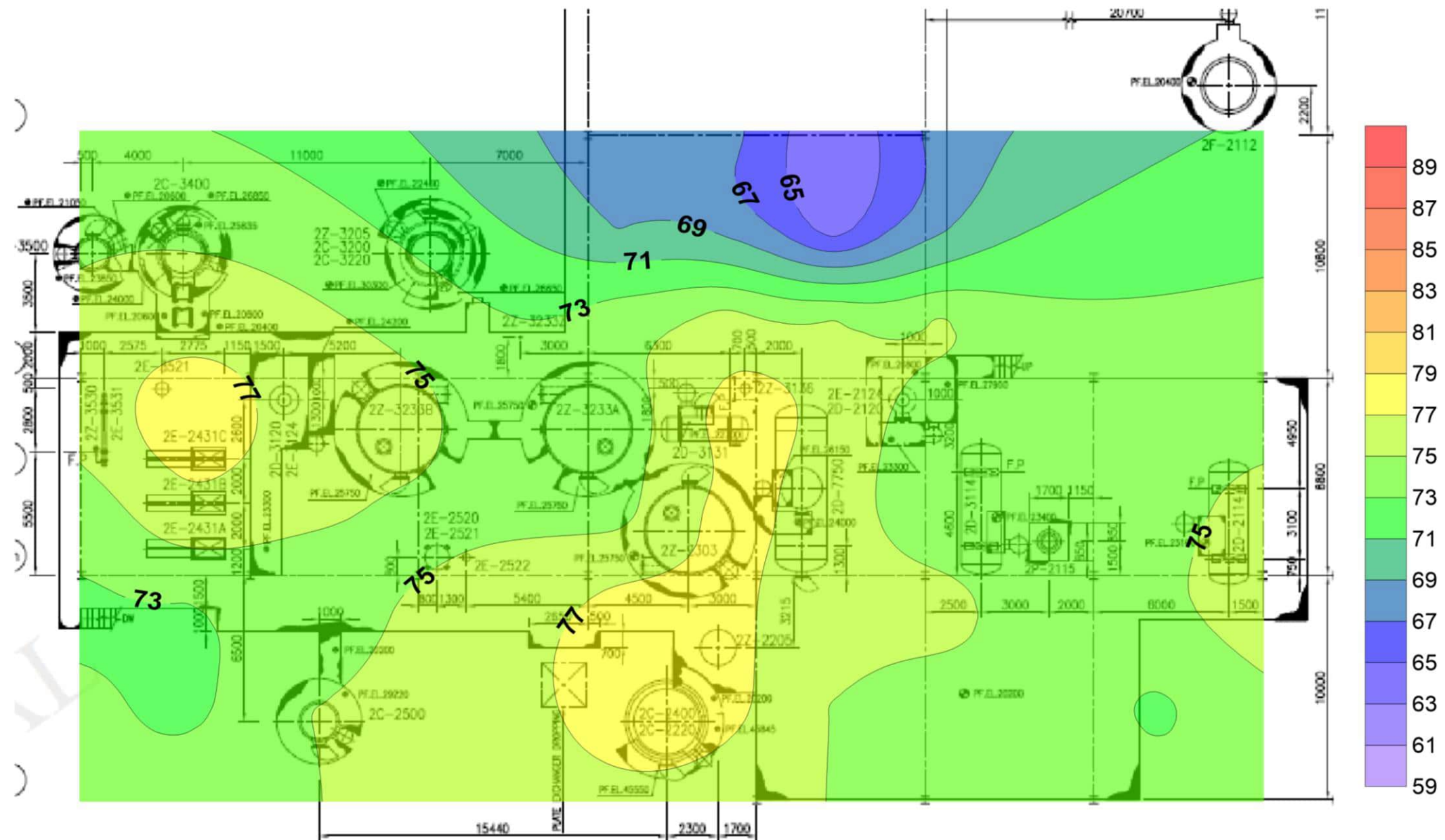
Noise Contour Map

THAI MMA Co., Ltd.

Reference Number : Lot 2432088-1

Measurement Date : Apr 30, 2024

#2000-#3000 Oxidation Unit M2 FL.4



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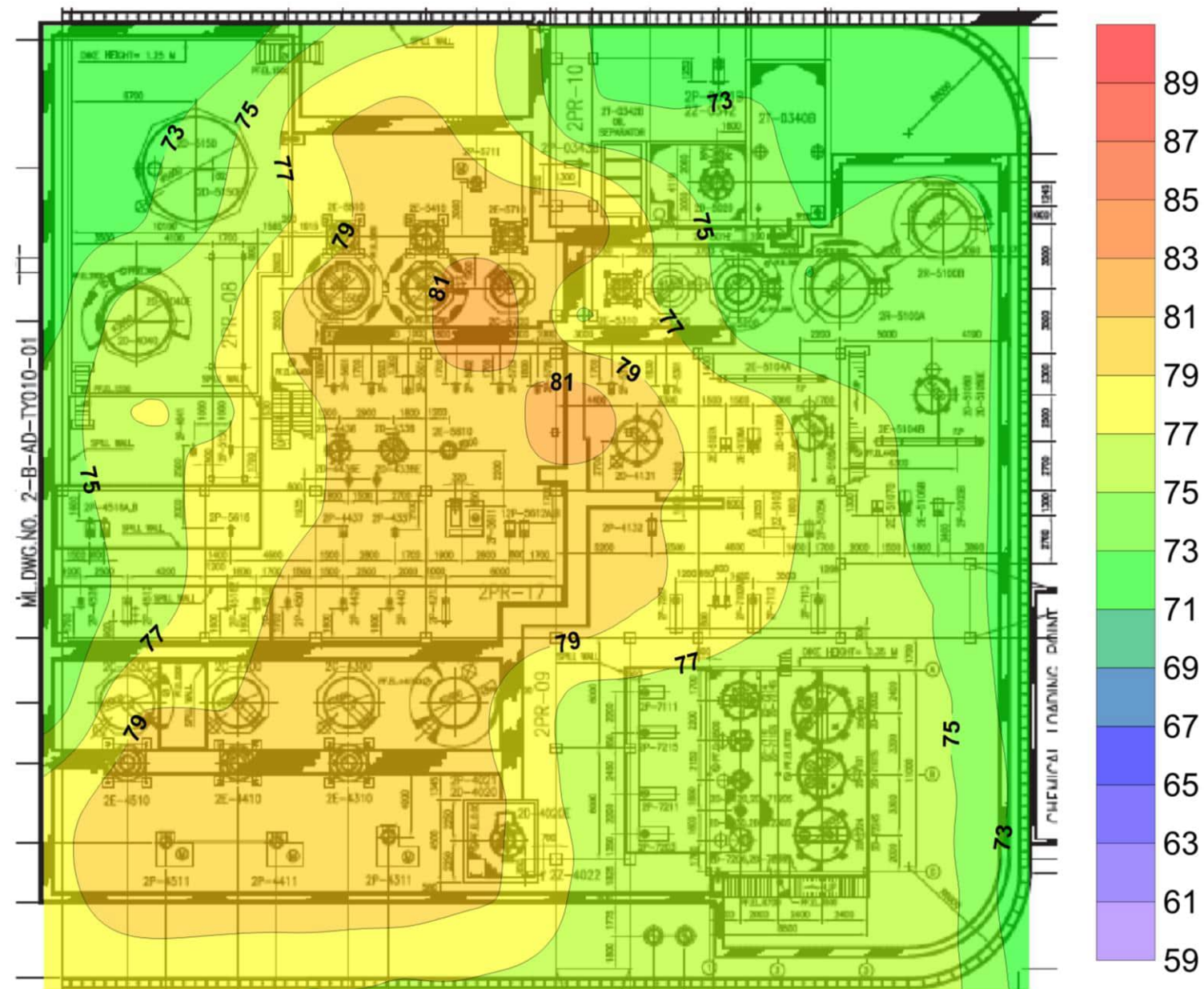
Noise Contour Map

THAI MMA Co., Ltd.

Reference Number : Lot 2432088-1

Measurement Date : Apr 30, 2024

#4000-#5000 MMA Recovery, Esterification Inhibitor Unit M2 FL.1



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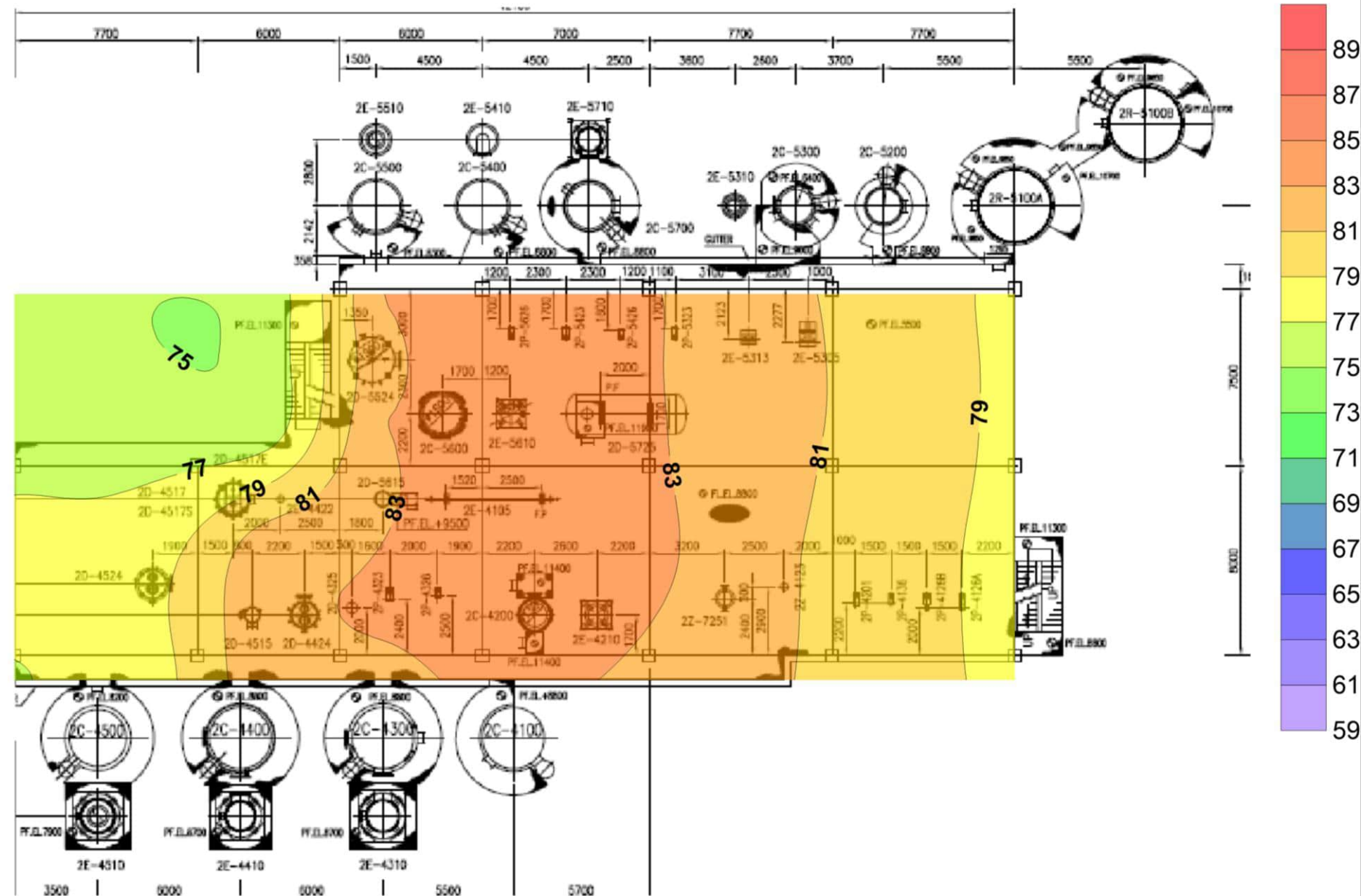
Noise Contour Map

THAI MMA Co., Ltd.

Reference Number : Lot 2432088-1

Measurement Date : Apr 30, 2024

#4000-#5000 MMA Recovery, Esterification Inhibitor Unit M2 FL.2



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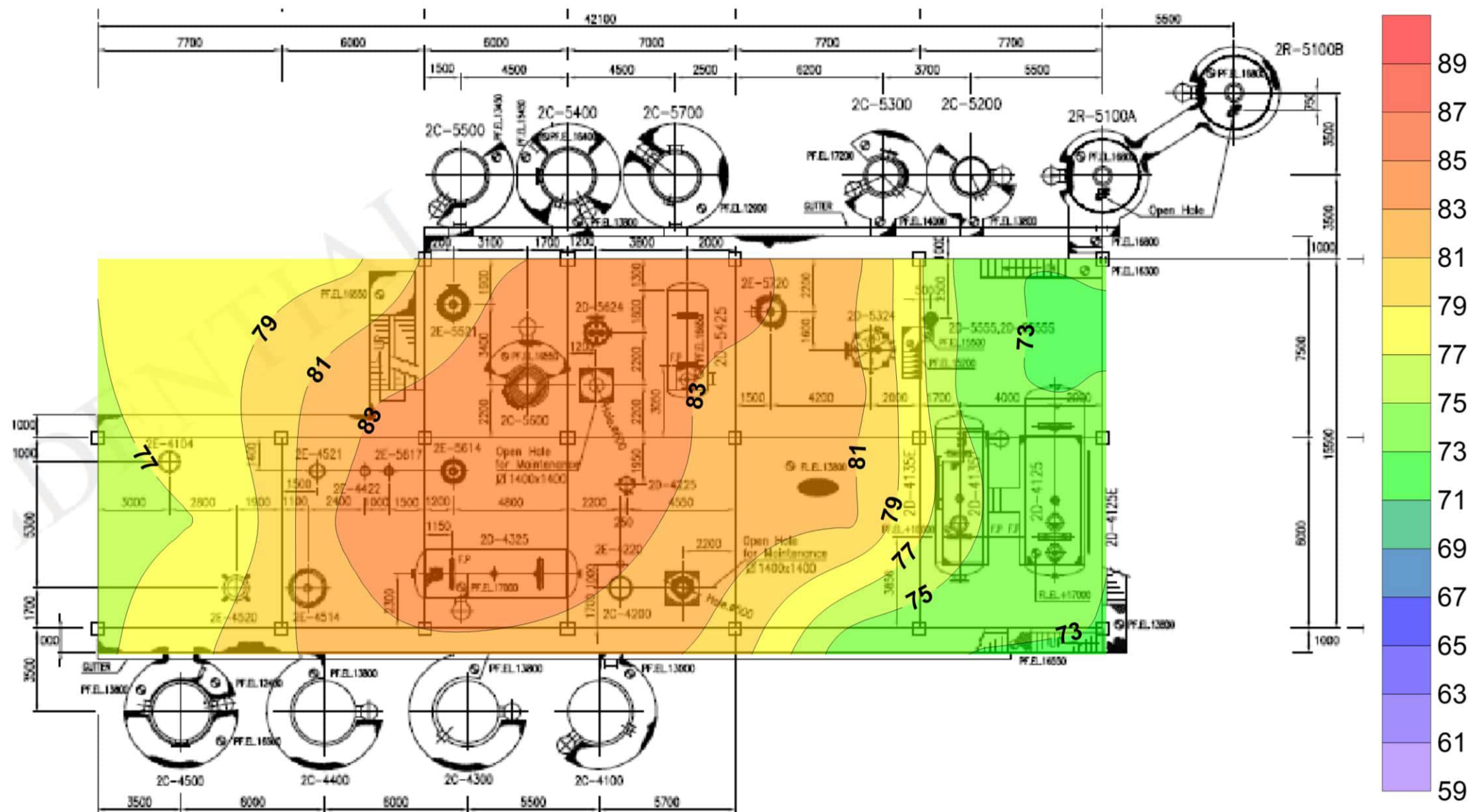
Noise Contour Map

THAI MMA Co., Ltd.

Reference Number : Lot 2432088-1

Measurement Date : Apr 30, 2024

#4000-#5000 MMA Recovery, Esterification Inhibitor Unit M2 FL.3



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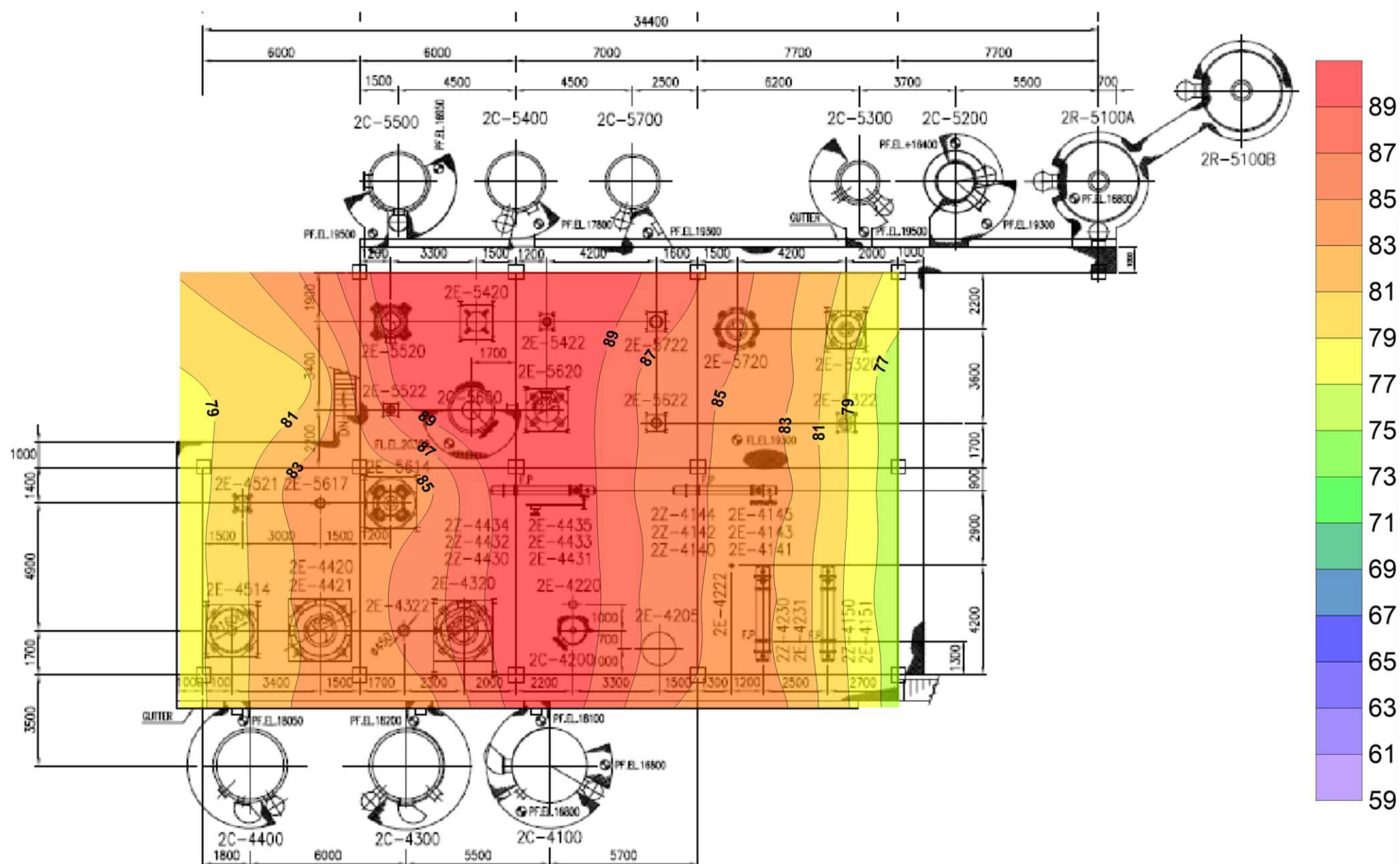
Noise Contour Map

THAI MMA Co., Ltd.

Reference Number : Lot 2432088-1

Measurement Date : Apr 30, 2024

#4000-#5000 MMA Recovery, Esterification Inhibitor Unit M2 FL.4



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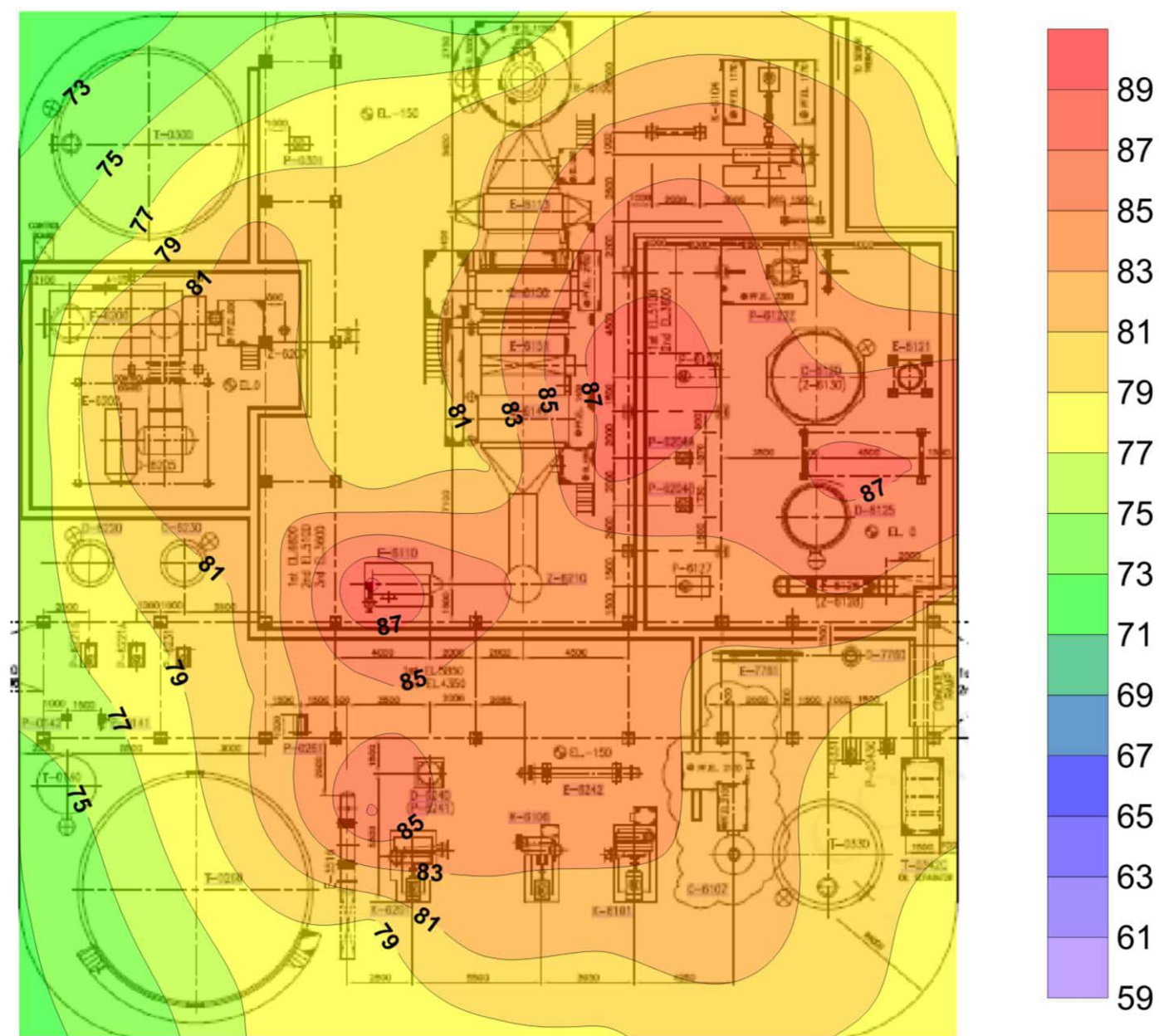
Noise Contour Map

THAI MMA Co., Ltd.

#6000 Waste and Disposal M2

Reference Number : Lot 2432088-1

Measurement Date : Apr 30, 2024



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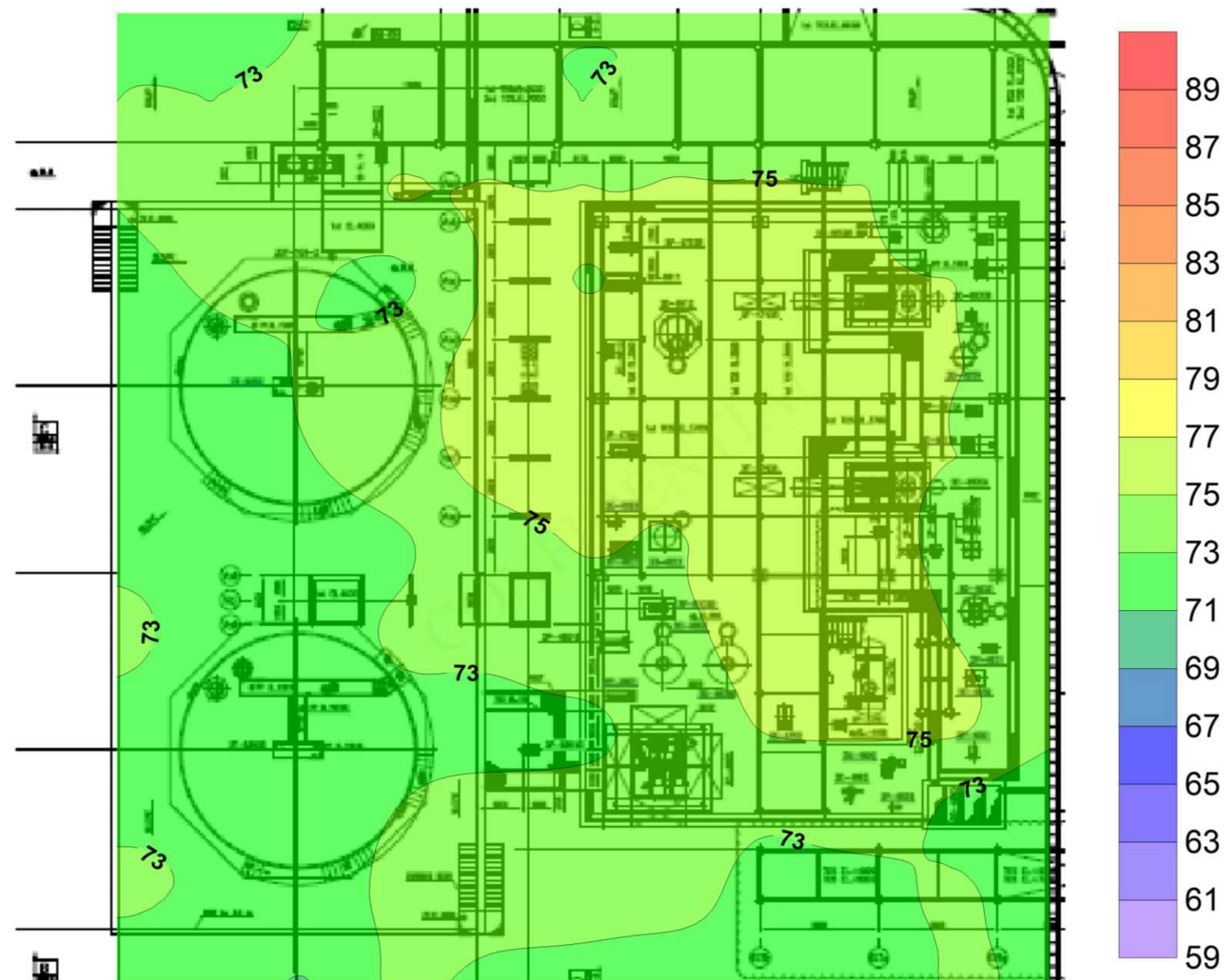
Noise Contour Map

THAI MMA Co., Ltd.

MAA Unit M2

Reference Number : Lot 2432088-1

Measurement Date : Apr 30, 2024



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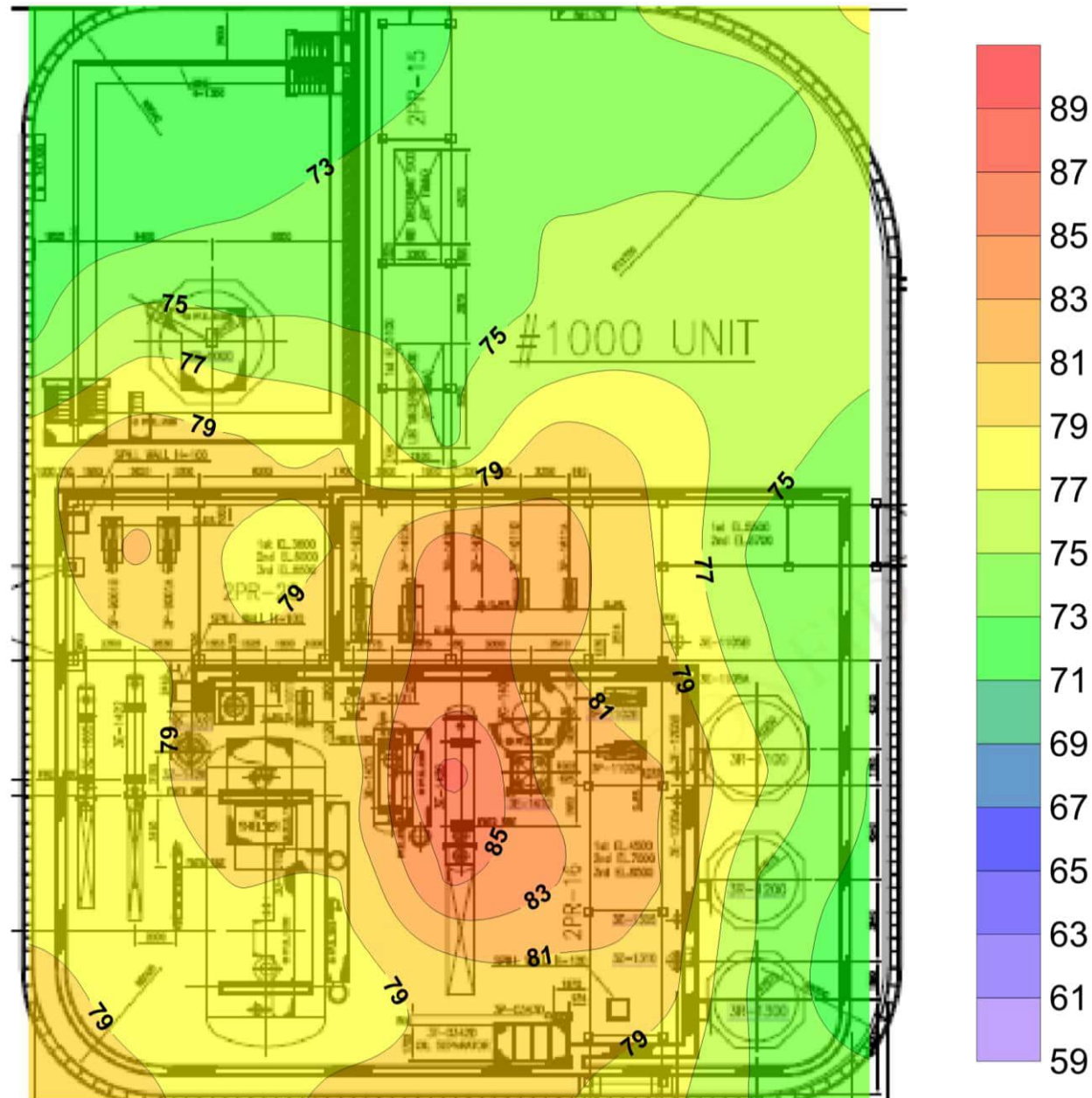
Noise Contour Map

THAI MMA Co., Ltd.

TBA M2 #1000 Unit

Reference Number : Lot 2432088-1

Measurement Date : Apr 30, 2024



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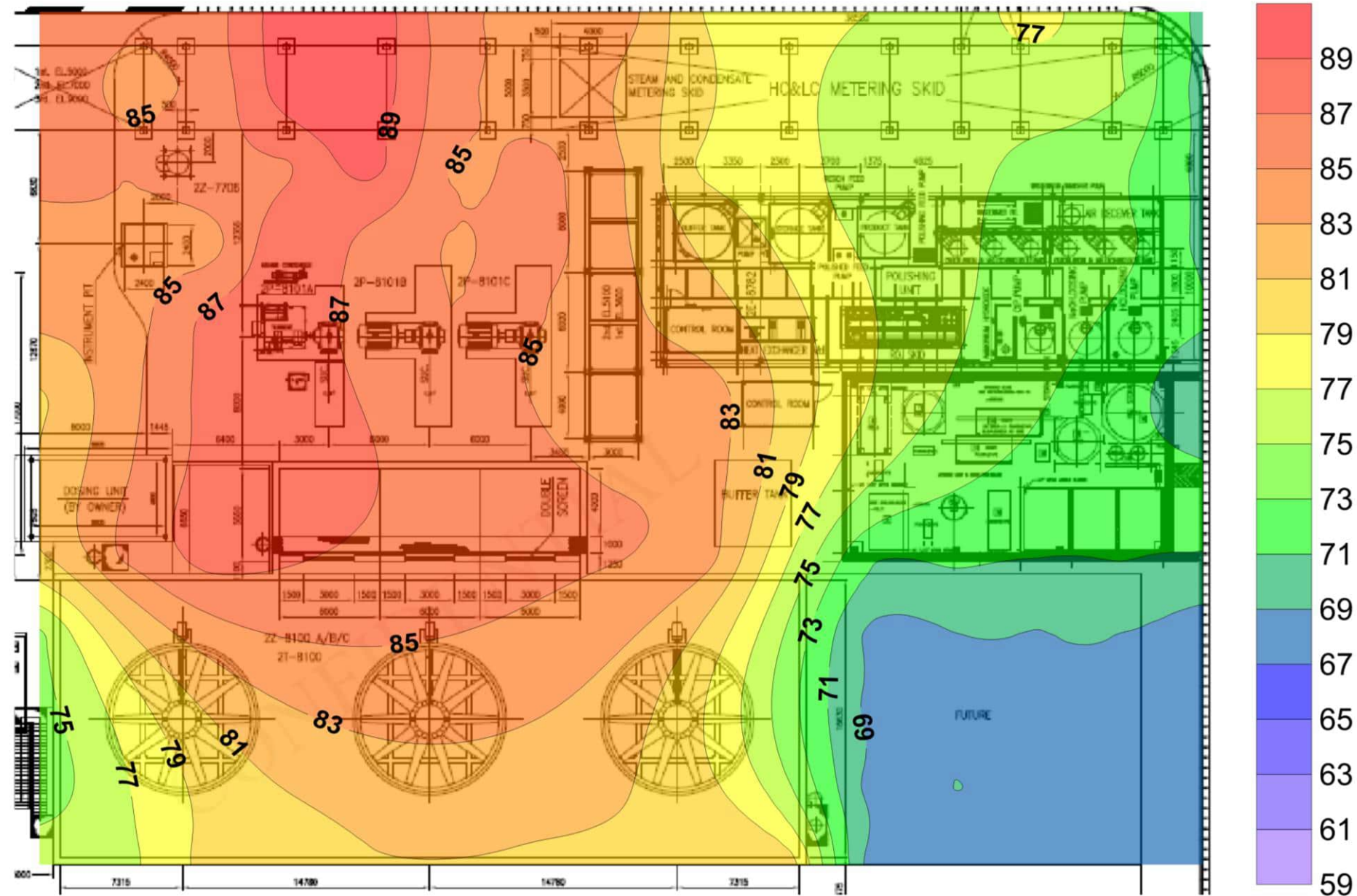
Noise Contour Map

THAI MMA Co., Ltd.

UT1 Cooling Tower M2

Reference Number : Lot 2432088-1

Measurement Date : Apr 30, 2024



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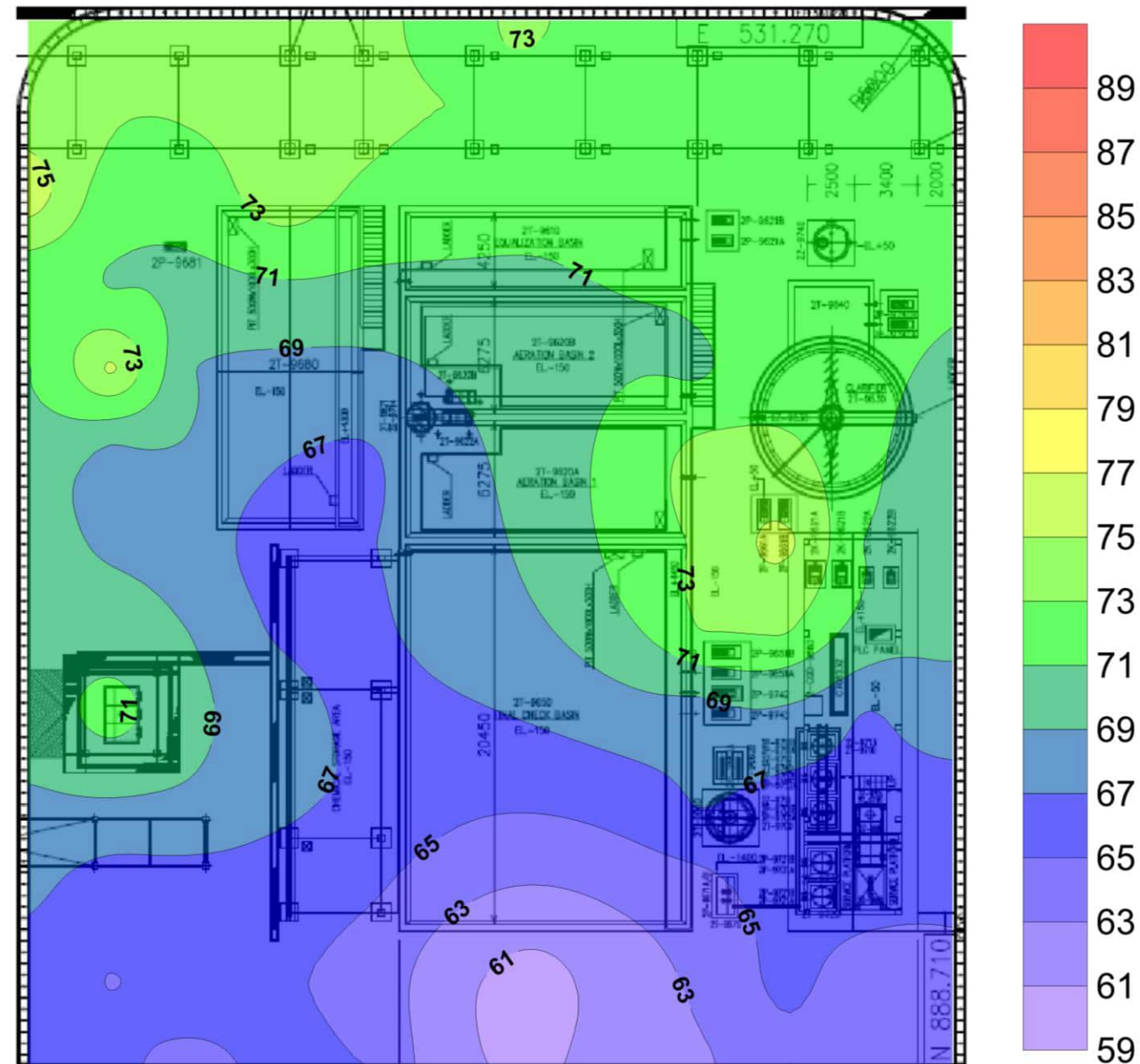
Noise Contour Map

THAI MMA Co., Ltd.

UT1 Waste Water M2

Reference Number : Lot 2432088-1

Measurement Date : Apr 30, 2024



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ภาคผนวก ค-8

ใบรับรองผลการตรวจวัดคุณภาพอากาศในสถานประกอบการ



Analysis / Test Report

TESTING
No.0009

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265973

Date Received : Feb 17, 2026
Date Reported : Feb 25, 2026
Report Number : 3491666-1

Page 2 of 5

Sample Number : 265973-2
Sampled Date : Feb 16, 2026
Sample Description : Air Quality
Location : โรงงาน MMA 1 @ 4/5000
Date Analysis Commenced : Feb 18, 2026
Condition of Sample : Contained in three sorbent tubes, refrigerated
Barometric Pressure : 757 mmHg
Atmospheric Temperature : 32.4 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Methanol *	10:30 AM - 12:30 PM	ppm	-	0.10	<0.10	200	NIOSH (1998), 2000	ACGIH	Bangkok
Methyl Methacrylate *	10:30 AM - 12:30 PM	ppm	-	0.5	<0.5	100	NIOSH (1994), 2537	MOL	Bangkok
Toluene	10:30 AM - 12:30 PM	ppm	-	0.05	<0.05	200	In - house method : STM 04-032 based on NIOSH Manual of Analytical Methods, 4th ed., NMAM, method 1501, issue 3, 2003 (Include sampling)	MOL	Bangkok

Guideline :

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2025).

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Chanon Booncheun

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.

Approved by

Saranya C.

Saranya Chalermthamrong
Scientist (4)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.



Analysis / Test Report

TESTING
No.0009

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265973

Date Received : Feb 17, 2026
Date Reported : Feb 25, 2026
Report Number : 3491666-1

Page 3 of 5

Sample Number : 265973-3
Sampled Date : Feb 16, 2026
Sample Description : Air Quality
Location : โรงงาน MMA 2 @ 4/5000
Date Analysis Commenced : Feb 18, 2026
Condition of Sample : Contained in three sorbent tubes, refrigerated
Barometric Pressure : 757 mmHg
Atmospheric Temperature : 32.4 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Methanol *	10:00 AM - 12:00 PM	ppm	-	0.10	<0.10	200	NIOSH (1998), 2000	ACGIH	Bangkok
Methyl Methacrylate *	10:00 AM - 12:00 PM	ppm	-	0.5	<0.5	100	NIOSH (1994), 2537	MOL	Bangkok
Toluene	10:00 AM - 12:00 PM	ppm	-	0.05	<0.05	200	In - house method : STM 04-032 based on NIOSH Manual of Analytical Methods, 4th ed., NMAM, method 1501, issue 3, 2003 (Include sampling)	MOL	Bangkok

Guideline :

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2025).

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Chanon Booncheun

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.

Approved by

Saranya C.

Saranya Chalermthamrong
Scientist (4)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.



Analysis / Test Report

TESTING
No.0009

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265973

Date Received : Feb 17, 2026
Date Reported : Feb 25, 2026
Report Number : 3491666-1

Page 4 of 5

Sample Number : 265973-4
Sampled Date : Feb 16, 2026
Sample Description : Air Quality
Location : โรงงาน MMA 1 @ 2/3000
Date Analysis Commenced : Feb 18, 2026
Condition of Sample : Contained in one sorbent tube, refrigerated
Barometric Pressure : 757 mmHg
Atmospheric Temperature : 32.4 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Acrylic acid *	10:20 AM - 12:20 PM	ppm	-	0.10	<0.10	2	Based on OSHA, PV2005	MOL	Bangkok

Guideline :

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Chanon Booncheun

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.

Approved by

Saranya C.

Saranya Chalermtamrong
Scientist (4)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.



Analysis / Test Report

TESTING
No.0009

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 265973

Date Received : Feb 17, 2026
Date Reported : Feb 25, 2026
Report Number : 3491666-1

Page 5 of 5

Sample Number : 265973-5
Sampled Date : Feb 16, 2026
Sample Description : Air Quality
Location : โรงงาน MMA 2 @ 2/3000
Date Analysis Commenced : Feb 18, 2026
Condition of Sample : Contained in one sorbent tube, refrigerated
Barometric Pressure : 757 mmHg
Atmospheric Temperature : 32.4 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Acrylic acid *	10:10 AM - 12:10 PM	ppm	-	0.10	<0.10	2	Based on OSHA, PV2005	MOL	Bangkok

Guideline :

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Chanon Booncheun

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.

Approved by

Saranya C.

Saranya Chalermtamrong
Scientist (4)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.



Analysis / Test Report

TESTING
No.0009

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2633638

Date Received : Jun 04, 2026
Date Reported : Jun 12, 2026
Report Number : 3554943-1

Page 2 of 5

Sample Number 2633638-2
Sampled Date Jun 04, 2026
Sample Description Air Quality
Location โรงงาน MMA 1 @ 4/5000
Date Analysis Commenced Jun 08, 2026
Condition of Sample Drawn into three sorbent tubes, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 32.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Methanol *	09:00 AM - 11:00 AM	ppm	-	0.10	<0.10	200	NIOSH (1998), 2000	ACGIH	Bangkok
Methyl Methacrylate *	09:00 AM - 11:00 AM	ppm	-	0.5	<0.5	100	NIOSH (1994), 2537	MOL	Bangkok
Toluene	09:00 AM - 11:00 AM	ppm	-	0.05	<0.05	200	In - house method : STM 04-032 based on NIOSH Manual of Analytical Methods, 4th ed., NMAM, method 1501, issue 3, 2003 (Include sampling)	MOL	Bangkok

Guideline :

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2025).

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Apisit Singha

Remark :

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

Orawan R.

Orawan Rakyong
Scientist (3)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.



Analysis / Test Report

TESTING
No.0009

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2633638

Date Received : Jun 04, 2026
Date Reported : Jun 12, 2026
Report Number : 3554943-1

Page 3 of 5

Sample Number 2633638-3
Sampled Date Jun 04, 2026
Sample Description Air Quality
Location โรงงาน MMA 2 @ 4/5000
Date Analysis Commenced Jun 08, 2026
Condition of Sample Drawn into three sorbent tubes, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 32.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Methanol *	09:00 AM - 11:00 AM	ppm	-	0.10	<0.10	200	NIOSH (1998), 2000	ACGIH	Bangkok
Methyl Methacrylate *	09:00 AM - 11:00 AM	ppm	-	0.5	<0.5	100	NIOSH (1994), 2537	MOL	Bangkok
Toluene	09:00 AM - 11:00 AM	ppm	-	0.05	<0.05	200	In - house method : STM 04-032 based on NIOSH Manual of Analytical Methods, 4th ed., NMAM, method 1501, issue 3, 2003 (Include sampling)	MOL	Bangkok

Guideline :

ACGIH : The American Conference of Governmental Industrial Hygiene, The 6th edition of the Documentation of the Threshold Limit Values and Biological Exposure Indices (2025).

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Apisit Singha

Remark :

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Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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TESTING
No.0009

Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2633638

Date Received : Jun 04, 2026
Date Reported : Jun 12, 2026
Report Number : 3554943-1

Page 4 of 5

Sample Number 2633638-4
Sampled Date Jun 04, 2026
Sample Description Air Quality
Location โรงงาน MMA 1 @ 2/3000
Date Analysis Commenced Jun 08, 2026
Condition of Sample Drawn into one sorbent tube, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 32.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Acrylic acid *	10:45 AM - 12:45 PM	ppm	-	0.10	<0.10	2	Based on OSHA, PV2005	MOL	Bangkok

Guideline :

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Apisit Singha

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.

Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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Analysis / Test Report

TESTING
No.0009

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2633638

Date Received : Jun 04, 2026
Date Reported : Jun 12, 2026
Report Number : 3554943-1

Page 5 of 5

Sample Number 2633638-5
Sampled Date Jun 04, 2026
Sample Description Air Quality
Location โรงงาน MMA 2 @ 2/3000
Date Analysis Commenced Jun 08, 2026
Condition of Sample Drawn into one sorbent tube, refrigerated
Barometric Pressure 752 mmHg
Atmospheric Temperature 32.0 °C

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Acrylic acid *	11:00 AM - 01:00 PM	ppm	-	0.10	<0.10	2	Based on OSHA, PV2005	MOL	Bangkok

Guideline :

MOL : Announcement of the Department of Labour Protection and Welfare on Threshold Limit Values of Hazardous Chemical Substances Dated August 3, B.E. 2560 (2017)

Sampled By : Apisit Singha

Remark :

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

Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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ภาคผนวก ค-9

ใบรับรองผลการตรวจวิเคราะห์น้ำใต้ดิน



Analysis / Test Report

TESTING
No.0009

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2639901
Date Received : Jun 16, 2026
Date Reported : Jun 25, 2026
Report Number : 3605317-2 C1

Page 1 of 1

Sample Number	2639901-1						
Sampled Date	Jun 16, 2026 2:40 PM						
Sample Description	Groundwater						
Location	WM#01 บริเวณอาคาร Product Loading						
Date Analysis Commenced	Jun 17, 2026						
Condition of Sample	Contained in four glass vials, two amber glass bottles and two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Organic Compounds							
Butanol *	mg/L	-	10	<10	240	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Methanol *	mg/L	-	0.01	<0.01	60	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Volatile Organics Compounds							
Acetone *	mg/L	0.001	0.01	Not Detected	230	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Toluene	mg/L	0.00004	0.0005	Not Detected	5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok

Guideline : Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038 , Patchanon Inprik ทะเบียนเลขที่ ว-204-จ-0197

Remark :

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

Technical Management

Nant Somb

Nanthawadee Somboon
Specialist 2
ทะเบียนเลขที่ ว-204-จ-0010

Approved by

Kanok Korn Anek

Kanokkorn Anek
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0004

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8032-71/ EMAIL

C:\Users\nanthawadee.somboon\Desktop\THAI MMA Co., Ltd._Agr8032-71_rpt (1:46PM)



Analysis / Test Report

TESTING
No.0009

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2639901
Date Received : Jun 16, 2026
Date Reported : Jun 25, 2026
Report Number : 3605318-2 C1

Page 1 of 1

Sample Number	2639901-2						
Sampled Date	Jun 16, 2026 10:40 AM						
Sample Description	Groundwater						
Location	WM#02 บริเวณ Unit#1000 ติดกับรั้ว ROC						
Date Analysis Commenced	Jun 17, 2026						
Condition of Sample	Contained in four glass vials, two amber glass bottles and two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Organic Compounds							
Butanol *	mg/L	-	10	<10	240	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Methanol *	mg/L	-	0.01	<0.01	60	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Volatile Organics Compounds							
Acetone *	mg/L	0.001	0.01	Not Detected	230	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Toluene	mg/L	0.00004	0.0005	Not Detected	5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok

Guideline : Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038 , Patchanon Inprik ทะเบียนเลขที่ ว-204-จ-0197

Remark :

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Nant Somb

Nanthawadee Somboon
Specialist 2
ทะเบียนเลขที่ ว-204-จ-0010

Approved by

Kanok Korn Anek

Kanokkorn Anek
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0004

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ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197

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8032-71/ EMAIL

C:\Users\nanthawadee.somboon\Desktop\THAI MMA Co., Ltd._Agr8032-71_rpt (1:47PM)



Analysis / Test Report

TESTING
No.0009

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2639901
Date Received : Jun 16, 2026
Date Reported : Jun 25, 2026
Report Number : 3605319-2 C1

Page 1 of 1

Sample Number	2639901-3						
Sampled Date	Jun 16, 2026 3:10 PM						
Sample Description	Groundwater						
Location	WM#03 บริเวณหน้าอาคารเทคนิค						
Date Analysis Commenced	Jun 17, 2026						
Condition of Sample	Contained in four glass vials, two amber glass bottles and two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Organic Compounds							
Butanol *	mg/L	-	10	<10	240	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Methanol *	mg/L	-	0.01	<0.01	60	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Volatile Organics Compounds							
Acetone *	mg/L	0.001	0.01	Not Detected	230	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Toluene	mg/L	0.00004	0.0005	Not Detected	5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok

Guideline : Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038 , Patchanon Inprik ทะเบียนเลขที่ ว-204-จ-0197

Remark :

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Nant Somb

Nanthawadee Somboon
Specialist 2
ทะเบียนเลขที่ ว-204-จ-0010

Approved by

Kanok Korn Anek

Kanokkorn Anek
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0004

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

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Analysis / Test Report

TESTING
No.0009

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-2025-336
Project Name : Environmental Monitoring
Project Location : MMA Site 3

Lot ID: 2639901
Date Received : Jun 16, 2026
Date Reported : Jun 25, 2026
Report Number : 3605320-2 C1

Page 1 of 1

Sample Number	2639901-4						
Sampled Date	Jun 16, 2026 11:20 AM						
Sample Description	Groundwater						
Location	WM#04 บริเวณ Unit#1000 ติดกับรั้ว ROC						
Date Analysis Commenced	Jun 17, 2026						
Condition of Sample	Contained in four glass vials, two amber glass bottles and two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Organic Compounds							
Butanol *	mg/L	-	10	<10	240	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Methanol *	mg/L	-	0.01	<0.01	60	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Volatile Organics Compounds							
Acetone *	mg/L	0.001	0.01	Not Detected	230	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok
Toluene	mg/L	0.00004	0.0005	Not Detected	5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 6200 B	Bangkok

Guideline : Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

Sampling By : Wanlop Hunchainaow ทะเบียนเลขที่ ว-323-จ-0038 , Patchanon Inprik ทะเบียนเลขที่ ว-204-จ-0197

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Nant Somb

Nanthawadee Somboon
Specialist 2
ทะเบียนเลขที่ ว-204-จ-0010

Approved by

Kanok Korn Anek

Kanokkorn Anek
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0004

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ภาคผนวก ค-10

ใบรับรองผลการตรวจวิเคราะห์ดิน



Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location :

Lot ID: 2542676

Date Received : Jun 16, 2025

Date Reported : Jun 24, 2025

Report Number : 3343683-1

Page 1 of 1

Sample Number 2542676-1
Sampled Date Jun 16, 2025 9:55 AM
Sample Description Soil
Location WM#01 บริเวณอาคาร Product Loading
Date Analysis Commenced Jun 17, 2025
Condition of Sample Packed in one plastic bag and one glass bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/kg	-	1.00	41.8	1000	United States Environmental Protection Agency, EPA Method 3050 B and 6010 D	Bangkok
Organic Compounds							
Butanol	mg/kg	-	20	<20	1000	United States Environmental Protection Agency, EPA Method 5021 A and 8260 D	Bangkok
Methanol	mg/kg	-	10	<10	1000	United States Environmental Protection Agency, EPA Method 5021 A and 8260 D	Bangkok
Petroleum Hydrocarbons							
TPH C>8-C16	mg/kg	-	0.5	<0.5	25	United States Environmental Protection Agency, EPA Method 3541 and 8015 C	Bangkok
TPH C5-C8	mg/kg	-	0.5	<0.5	25	United States Environmental Protection Agency, EPA Method 5035 and 8260 D	Bangkok
Volatile Organics Compounds							
Acetone	mg/kg	-	0.2	<0.2	1000	United States Environmental Protection Agency, EPA Method 5035 and 8260 D	Bangkok
Toluene	mg/kg	-	0.05	<0.05	520	United States Environmental Protection Agency, EPA Method 5035 and 8260 D	Bangkok

Guideline : Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

Note :
1. Analysis Results expressed on dry basis
2. TPH C5-C8: Sum of n-Pentane, n-Hexane, n-Heptane and n-Octane
TPH C>8-C16: Sum of n-Nonane, n-Decane, n-Undecane, n-Dodecane, n-Tridecane, n-Tetradecane, n-Pentadecane and n-Hexadecane
Integration mode: Peak to Peak

Sampling By : Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

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

Technical Management

Sawitree N.

Sawitree Noisangiam
Manager

ทะเบียนเลขที่ ว-204-จ-0007

Approved by

Kanok Korn Anek

Kanokkorn Anek
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0004

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-23-13

Project Name : Environmental Monitoring

Project Location :

Lot ID: 2542676

Date Received : Jun 16, 2025

Date Reported : Jun 24, 2025

Report Number : 3343683-2

Page 1 of 1

Sample Number	2542676-1						
Sampled Date	Jun 16, 2025 9:55 AM						
Sample Description	Soil						
Location	WM#01 บริเวณอาคาร Product Loading						
Date Analysis Commenced	Jun 17, 2025						
Condition of Sample	Packed in one plastic bag and one glass bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Physical Parameters							
Moisture	%	-	0.1	9.5	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 G	Bangkok
Soil Testing							
pH aqueous phase 50% (w/v)		-	-	6.3	No Standard	United States Environmental Protection Agency, EPA Method 9045 D	Bangkok

Guideline : Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

Sampling By : Pattarapol Sawangjaitam

Remark :

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

Approved by

Siriluk P.

Siriluk Bunnak
Section Head

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location :

Lot ID: 2542676

Date Received : Jun 16, 2025

Date Reported : Jun 24, 2025

Report Number : 3343684-1

Page 1 of 1

Sample Number	2542676-2
Sampled Date	Jun 16, 2025 10:48 AM
Sample Description	Soil
Location	WM#02 บริเวณ Unit#1000 ติดกับรั้ว ROC
Date Analysis Commenced	Jun 17, 2025
Condition of Sample	Packed in one plastic bag and one glass bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/kg	-	1.00	33.9	1000	United States Environmental Protection Agency, EPA Method 3050 B and 6010 D	Bangkok
Organic Compounds							
Butanol	mg/kg	-	20	<20	1000	United States Environmental Protection Agency, EPA Method 5021 A and 8260 D	Bangkok
Methanol	mg/kg	-	10	<10	1000	United States Environmental Protection Agency, EPA Method 5021 A and 8260 D	Bangkok
Petroleum Hydrocarbons							
TPH C>8-C16	mg/kg	-	0.5	<0.5	25	United States Environmental Protection Agency, EPA Method 3541 and 8015 C	Bangkok
TPH C5-C8	mg/kg	-	0.5	<0.5	25	United States Environmental Protection Agency, EPA Method 5035 and 8260 D	Bangkok
Volatile Organics Compounds							
Acetone	mg/kg	-	0.2	<0.2	1000	United States Environmental Protection Agency, EPA Method 5035 and 8260 D	Bangkok
Toluene	mg/kg	-	0.05	<0.05	520	United States Environmental Protection Agency, EPA Method 5035 and 8260 D	Bangkok

Guideline : Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

Note :

1. Analysis Results expressed on dry basis
2. TPH C5-C8: Sum of n-Pentane, n-Hexane, n-Heptane and n-Octane

TPH C>8-C16: Sum of n-Nonane, n-Decane, n-Undecane, n-Dodecane, n-Tridecane, n-Tetradecane, n-Pentadecane and n-Hexadecane

Integration mode: Peak to Peak

Sampling By : Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

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

Technical Management

Savitree N.

Savitree Noisangiam
Manager

ทะเบียนเลขที่ ว-204-จ-0007

Approved by

Kanokkorn Anek

Kanokkorn Anek
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0004

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.



Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location :

Lot ID: 2542676

Date Received : Jun 16, 2025

Date Reported : Jun 24, 2025

Report Number : 3343684-2

Page 1 of 1

Sample Number	2542676-2						
Sampled Date	Jun 16, 2025 10:48 AM						
Sample Description	Soil						
Location	WM#02 บริเวณ Unit#1000 ติดกับรั้ว ROC						
Date Analysis Commenced	Jun 17, 2025						
Condition of Sample	Packed in one plastic bag and one glass bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Physical Parameters							
Moisture	%	-	0.1	11.0	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 G	Bangkok
Soil Testing							
pH aqueous phase 50% (w/v)		-	-	7.9	No Standard	United States Environmental Protection Agency, EPA Method 9045 D	Bangkok

Guideline : Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

Sampling By : Pattarapol Sawangjaitam

Remark :

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

Approved by

Siriluk P.

Siriluk Bunnak
Section Head

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location :

Lot ID: 2542676

Date Received : Jun 16, 2025
Date Reported : Jun 24, 2025
Report Number : 3343685-1

Page 1 of 1

Sample Number 2542676-3
Sampled Date Jun 16, 2025 12:05 PM
Sample Description Soil
Location WM#03 บริเวณหน้าอาคารเทคนิค
Date Analysis Commenced Jun 17, 2025
Condition of Sample Packed in one plastic bag and one glass bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/kg	-	1.00	46.5	1000	United States Environmental Protection Agency, EPA Method 3050 B and 6010 D	Bangkok
Organic Compounds							
Butanol	mg/kg	-	20	<20	1000	United States Environmental Protection Agency, EPA Method 5021 A and 8260 D	Bangkok
Methanol	mg/kg	-	10	<10	1000	United States Environmental Protection Agency, EPA Method 5021 A and 8260 D	Bangkok
Petroleum Hydrocarbons							
TPH C>8-C16	mg/kg	-	0.5	<0.5	25	United States Environmental Protection Agency, EPA Method 3541 and 8015 C	Bangkok
TPH C5-C8	mg/kg	-	0.5	<0.5	25	United States Environmental Protection Agency, EPA Method 5035 and 8260 D	Bangkok
Volatile Organics Compounds							
Acetone	mg/kg	-	0.2	<0.2	1000	United States Environmental Protection Agency, EPA Method 5035 and 8260 D	Bangkok
Toluene	mg/kg	-	0.05	<0.05	520	United States Environmental Protection Agency, EPA Method 5035 and 8260 D	Bangkok

Guideline : Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

Note :
1. Analysis Results expressed on dry basis
2. TPH C5-C8: Sum of n-Pentane, n-Hexane, n-Heptane and n-Octane
TPH C>8-C16: Sum of n-Nonane, n-Decane, n-Undecane, n-Dodecane, n-Tridecane, n-Tetradecane, n-Pentadecane and n-Hexadecane
Integration mode: Peak to Peak

Sampling By : Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

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

Technical Management

Savitree N.

Savitree Noisangiam
Manager

ทะเบียนเลขที่ ว-204-จ-0007

Approved by

Kanokkorn Anek

Kanokkorn Anek
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0004

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.



Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-23-13

Project Name : Environmental Monitoring

Project Location :

Lot ID: 2542676

Date Received : Jun 16, 2025

Date Reported : Jun 24, 2025

Report Number : 3343685-2

Page 1 of 1

Sample Number	2542676-3						
Sampled Date	Jun 16, 2025 12:05 PM						
Sample Description	Soil						
Location	WM#03 บริเวณหน้าอาคารเทคนิค						
Date Analysis Commenced	Jun 17, 2025						
Condition of Sample	Packed in one plastic bag and one glass bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Physical Parameters							
Moisture	%	-	0.1	8.7	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 G	Bangkok
Soil Testing							
pH aqueous phase 50% (w/v)		-	-	8.2	No Standard	United States Environmental Protection Agency, EPA Method 9045 D	Bangkok

Guideline : Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

Note :

1. Analysis Results expressed on dry basis
2. TPH C5-C8: Sum of n-Pentane, n-Hexane, n-Heptane and n-Octane
TPH C>8-C16: Sum of n-Nonane, n-Decane, n-Undecane, n-Dodecane, n-Tridecane, n-Tetradecane, n-Pentadecane and n-Hexadecane
Integration mode: Peak to Peak

Sampling By : Pattarapol Sawangjaitam

Remark :

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

Approved by

Siriluk P.

Siriluk Bunnak
Section Head

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150
P/O : PMM-23-13
Project Name : Environmental Monitoring
Project Location :

Lot ID: 2542676

Date Received : Jun 16, 2025

Date Reported : Jun 24, 2025

Report Number : 3343686-1

Page 1 of 1

Sample Number	2542676-4
Sampled Date	Jun 16, 2025 11:23 AM
Sample Description	Soil
Location	WM#04 บริเวณ Unit#1000 ติดกับรั้ว ROC
Date Analysis Commenced	Jun 17, 2025
Condition of Sample	Packed in one plastic bag and one glass bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/kg	-	1.00	324	1000	United States Environmental Protection Agency, EPA Method 3050 B and 6010 D	Bangkok
Organic Compounds							
Butanol	mg/kg	-	20	<20	1000	United States Environmental Protection Agency, EPA Method 5021 A and 8260 D	Bangkok
Methanol	mg/kg	-	10	<10	1000	United States Environmental Protection Agency, EPA Method 5021 A and 8260 D	Bangkok
Petroleum Hydrocarbons							
TPH C>8-C16	mg/kg	-	0.5	<0.5	25	United States Environmental Protection Agency, EPA Method 3541 and 8015 C	Bangkok
TPH C5-C8	mg/kg	-	0.5	<0.5	25	United States Environmental Protection Agency, EPA Method 5035 and 8260 D	Bangkok
Volatile Organics Compounds							
Acetone	mg/kg	-	0.2	<0.2	1000	United States Environmental Protection Agency, EPA Method 5035 and 8260 D	Bangkok
Toluene	mg/kg	-	0.05	<0.05	520	United States Environmental Protection Agency, EPA Method 5035 and 8260 D	Bangkok

Guideline : Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

Note :

1. Analysis Results expressed on dry basis
2. TPH C5-C8: Sum of n-Pentane, n-Hexane, n-Heptane and n-Octane

TPH C>8-C16: Sum of n-Nonane, n-Decane, n-Undecane, n-Dodecane, n-Tridecane, n-Tetradecane, n-Pentadecane and n-Hexadecane

Integration mode: Peak to Peak

Sampling By : Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

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

Technical Management

Savitree N.

Savitree Noisangiam
Manager

ทะเบียนเลขที่ ว-204-จ-0007

Approved by

Kanok Korn Anek

Kanokkorn Anek
Assistant General Manager
ทะเบียนเลขที่ ว-204-ค-0004

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Analysis / Test Report

Client : THAI MMA Co., Ltd.
271, Sukhumvit Road, T. Map Ta Phut, A. Muang, Rayong Thailand 21150

P/O : PMM-23-13

Project Name : Environmental Monitoring

Project Location :

Lot ID: 2542676

Date Received : Jun 16, 2025

Date Reported : Jun 24, 2025

Report Number : 3343686-2

Page 1 of 1

Sample Number	2542676-4
Sampled Date	Jun 16, 2025 11:23 AM
Sample Description	Soil
Location	WM#04 บริเวณ Unit#1000 ติดกับรั้ว ROC
Date Analysis Commenced	Jun 17, 2025
Condition of Sample	Packed in one plastic bag and one glass bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Physical Parameters							
Moisture	%	-	0.1	8.2	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 G	Bangkok
Soil Testing							
pH aqueous phase 50% (w/v)		-	-	8.6	No Standard	United States Environmental Protection Agency, EPA Method 9045 D	Bangkok

Guideline : Notification of the Ministry of Industry B.E. 2559 (2016) on Soil and Groundwater Contamination Criteria, Monitoring of Soil and Groundwater Quality, Report Submission and Report Preparation of Soil and Groundwater Quality, and Proposal Report of Soil and Groundwater Controlling and Reduction Measures

Note :
1. Analysis Results expressed on dry basis
2. TPH C5-C8: Sum of n-Pentane, n-Hexane, n-Heptane and n-Octane
TPH C>8-C16: Sum of n-Nonane, n-Decane, n-Undecane, n-Dodecane, n-Tridecane, n-Tetradecane, n-Pentadecane and n-Hexadecane
Integration mode: Peak to Peak

Sampling By : Pattarapol Sawangjaitam

Remark :

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

Approved by

Siriluk P.

Siriluk Bunnak
Section Head

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