

ภาคผนวก ค

ใบรับรองผลการตรวจวิเคราะห์

ภาคผนวก ค-1

คุณภาพอากาศในบรรยากาศ



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PHM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345562
Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631330-1

Page 1 of 7

Sample Number : 2345562-1
Sampled Date : May 15, 2023
Sample Description : Air Quality
Location : อากาศบริเวณท่าอุตสาหกรรม TPE (Site # 1)
Date Analysis Commenced : May 25, 2023
Condition of Sample : Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated
Barometric Pressure : 759 mmHg
Atmospheric Temperature : 30.0 °C

Analyte	Sampled Date/Time	Unit	LOQ (LOB)	Result	Method	Testing Location
Air Testing						
n-Hexane	15/05/23 - 16/05/23	ppm	0.10	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	15/05/23 - 16/05/23	ppm	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

Sampled By : Sawal Tonpho

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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Silpaornchai Worawong, MSc, Jst, C. (40294)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PHM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345562
Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631330-1

Page 2 of 7

Sample Number : 2345562-2
Sampled Date : May 16, 2023
Sample Description : Air Quality
Location : อากาศบริเวณท่าอุตสาหกรรม TPE (Site # 1)
Date Analysis Commenced : May 25, 2023
Condition of Sample : Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated
Barometric Pressure : 759 mmHg
Atmospheric Temperature : 31.0 °C

Analyte	Sampled Date/Time	Unit	LOQ (LOB)	Result	Method	Testing Location
Air Testing						
n-Hexane	16/05/23 - 17/05/23	ppm	0.10	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	16/05/23 - 17/05/23	ppm	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

Sampled By : Sawal Tonpho

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 Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345562
Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631330-1

Page 3 of 7

Sample Number : 2345562-3
Sample Date : May 17, 2023
Sample Description : Air Quality
Location : อากาศในโรงงานอุตสาหกรรม TPE (Site # 1)
Date Analysis Commenced : May 25, 2023
Condition of Sample : Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated
Barometric Pressure : 759 mmHg
Atmospheric Temperature : 32.0 °C

Analyte	Sampled Date/Time	Unit	LOD	Result	Method	Testing Location
Air Testing						
n-Heptane	17/05/23 - 18/05/23	ppm	-	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	17/05/23 - 18/05/23	ppm	-	<1.0	Based on ASTM, D2712-18	Bangkok

Sampled By : Sawal Tonpho

Remark :

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

Approved by *Orawan R.*
Orawan Rakyong
Scientist (3)

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Analysis / Test Report

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Thailand 21150
P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345562
Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631330-1

Page 4 of 7

Sample Number : 2345562-4
Sample Date : May 18, 2023
Sample Description : Air Quality
Location : อากาศในโรงงานอุตสาหกรรม TPE (Site # 1)
Date Analysis Commenced : May 25, 2023
Condition of Sample : Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated
Barometric Pressure : 759 mmHg
Atmospheric Temperature : 32.0 °C

Analyte	Sampled Date/Time	Unit	LOD	Result	Method	Testing Location
Air Testing						
n-Heptane	18/05/23 - 19/05/23	ppm	-	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	18/05/23 - 19/05/23	ppm	-	<1.0	Based on ASTM, D2712-18	Bangkok

Sampled By : Sawal Tonpho

Remark :

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

Approved by *Orawan R.*
Orawan Rakyong
Scientist (3)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
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Thailand 21150
P/O : PMW-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345562
Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number: 2631330-1

Page 5 of 7

Sample Number	2345562-5						
Sampled Date	May 19, 2023						
Sample Description	Air Quality						
Location	บริเวณโรงงานอุตสาหกรรม TPE (Site # 1)						
Date Analysis Commenced	May 25, 2023						
Condition of Sample	Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated						
Barometric Pressure	759 mmHg						
Atmospheric Temperature	33.0 °C						
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Hexane	19/05/23 - 20/05/23	ppm	-	0.10	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	19/05/23 - 20/05/23	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

Sampled By : Sawal Tonphio

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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P/O : PMW-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345562
Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number: 2631330-1

Page 6 of 7

Sample Number	2345562-6						
Sampled Date	May 20, 2023						
Sample Description	Air Quality						
Location	พื้นที่อุตสาหกรรม TPE (Site # 1)						
Date Analysis Commenced	May 25, 2023						
Condition of Sample	Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated						
Barometric Pressure	759 mmHg						
Atmospheric Temperature	32.0 °C						
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Hexane	20/05/23 - 21/05/23	ppm	-	0.10	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	20/05/23 - 21/05/23	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

Sampled By : Sawal Tonphio

Remark :

- LOD : Limit of Detection
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Orawan R.
Orawan Rakyong
Scientist (3)

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P/O : PMM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345562

Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number: 2631330-1

Page 2 of 7

Sample Number	2345562-7						
Sampled Date	May 21, 2023						
Sample Description	Air Quality						
Location	ถนนวิภาวดีรังสิต กม. 15 เขตจตุจักร กรุงเทพมหานคร (Site # 1)						
Date Analysis Commenced	May 25, 2023						
Condition of Sample	Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated						
Barometric Pressure	759 mmHg						
Atmospheric Temperature	33.0 °C						
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Hexane	21/05/23 - 22/05/23	ppm	-	0.10	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	21/05/23 - 22/05/23	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

Sampled By : Sawal Tonpho

Remark :

- LOD : Limit of Detection
- "C" : Lower than LOQ (Unit of Quantitation) / LOQ (Unit of Reporting)

Approved by

Orawan R.
Orawan Rakyong
Scientist (3)

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1905-2611 (ENGL)

S:\Report\AK_Yueng_MG_jan (43394)



Analysis / Test Report

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Thailand 21150
P/O : PMM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565

Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number: 2631350-1

Page 1 of 21

Sample Number	2345565-1						
Sampled Date	May 15, 2023						
Sample Description	Air Quality						
Location	อากาศในโรงงานอุตสาหกรรม TPE Site#1						
Date Analysis Commenced	May 25, 2023						
Condition of Sample	Drawn into one 10-L air sampling bag						
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Total Hydrocarbon as Methane	15/05/23 - 16/05/23	ppm	-	1.0	3.0	EPA 40 CFR Part 50, Appendix C	Rayong

Sampled By : Sawal Tonpho

Remark :

- LOD : Limit of Detection
- "C" : Lower than LOQ (Unit of Quantitation) / LOQ (Unit of Reporting)

Approved by

Tharitat.
Tharita Kiatwong
Scientist (4)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
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Thailand 21150
P/O : PM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 2 of 21

Sample Number	2345565-2
Sampled Date	May 16, 2023
Sample Description	Air Quality
Location	บริเวณพื้นที่อุตสาหกรรม TPE Site#1
Date Analysis Commenced	May 25, 2023
Condition of Sample	Drawn into one 10-L air sampling bag
Analyte	
Air Testing	
Total Hydrocarbon as Methane	16/05/23 - 17/05/23
Unit	ppm
LOQ	1.0
Result	3.0
Method	EPA-40 CFR Part 50, Appendix C
Testing Location	Rayong

Sampled By : Sawal Toipho

Remark :

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Thanita Kulsurwong
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Analysis / Test Report

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Thailand 21150
P/O : PM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 3 of 21

Sample Number	2345565-3
Sampled Date	May 17, 2023
Sample Description	Air Quality
Location	บริเวณพื้นที่อุตสาหกรรม TPE Site#1
Date Analysis Commenced	May 25, 2023
Condition of Sample	Drawn into one 10-L air sampling bag
Analyte	
Air Testing	
Total Hydrocarbon as Methane	17/05/23 - 18/05/23
Unit	ppm
LOQ	1.0
Result	3.1
Method	EPA-40 CFR Part 50, Appendix C
Testing Location	Rayong

Sampled By : Sawal Toipho

Remark :

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Analysis / Test Report

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Thailand 21150
P/O : PMW-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565

Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 4 of 21

Sample Number	2345565-4						
Sampled Date	May 18, 2023						
Sample Description	Air Quality						
Location	อากาศบริเวณทางออกโรงงาน TPE Site#1						
Date Analysis Commenced	May 25, 2023						
Condition of Sample	Drawn into one 10-L air sampling bag						
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Total Hydrocarbon as Methane	18/05/23 - 19/05/23	ppm	-	1.0	4.2	EPA 40 CFR Part 50, Appendix C	Rayong

Sampled By : Sawal Tonpho

Remark :

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

Approved by

Tharitat Kulsriwong
Scientist (4)

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Analysis / Test Report

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Thailand 21150
P/O : PMW-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565

Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 5 of 21

Sample Number	2345565-5						
Sampled Date	May 19, 2023						
Sample Description	Air Quality						
Location	อากาศบริเวณทางออกโรงงาน TPE Site#1						
Date Analysis Commenced	May 25, 2023						
Condition of Sample	Drawn into one 10-L air sampling bag						
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Total Hydrocarbon as Methane	19/05/23 - 20/05/23	ppm	-	1.0	3.2	EPA 40 CFR Part 50, Appendix C	Rayong

Sampled By : Sawal Tonpho

Remark :

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

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Tharitat Kulsriwong
Scientist (4)

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Analysis / Test Report

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Thailand 21150
P/O : PMN-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 6 of 21

Sample Number	2345565-6								
Sampled Date	May 20, 2023								
Sample Description	Air Quality								
Location	อากาศบริเวณชุมชนบ้านนา TPE Site#1								
Date Analysis Commenced	May 25, 2023								
Condition of Sample	Drawn into one 10-L air sampling bag								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location		
Air Testing									
Total Hydrocarbon as	20/05/23 - 21/05/23	ppm	-	1.0	3.1	EPA 40 CFR Part 50, Appendix C	Rayong		

Sampled By : Sawal Torpho

Remark :

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

Tharitat.

Approved by

Tharita Kulurwong
Scientist (4)

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Analysis / Test Report

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Thailand 21150
P/O : PMN-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 7 of 21

Sample Number	2345565-7								
Sampled Date	May 21, 2023								
Sample Description	Air Quality								
Location	อากาศบริเวณชุมชนบ้านนา TPE Site#1								
Date Analysis Commenced	May 25, 2023								
Condition of Sample	Drawn Into one 10-L air sampling bag								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location		
Air Testing									
Total Hydrocarbon as Methane	21/05/23 - 22/05/23	ppm	-	1.0	5.3	EPA 40 CFR Part 50, Appendix C	Rayong		

Sampled By : Sawal Torpho

Remark :

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

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Approved by

Tharita Kulurwong
Scientist (4)

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S:\Report_Ur_Working_M2-JK (2309)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 6 of 21

Sample Number : 2345565-8
Sampled Date : May 15, 2023
Sample Description : Air Quality
Location : อู่เรือ
Date Analysis Commenced : May 25, 2023
Condition of Sample : Drawn into one 10-L air sampling bag

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Total Hydrocarbon as Methylene	15/05/23 - 16/05/23	ppm	-	1.0	3.0	EPA 40 CFR Part 50, Appendix C	Rayong

Sampled By : Sawal Tonpho

Remark:

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

Tharitat.

Approved by

Tharita Kulsurthong
Scientist (1)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 9 of 21

Sample Number : 2345565-9
Sampled Date : May 16, 2023
Sample Description : Air Quality
Location : อู่เรือ
Date Analysis Commenced : May 25, 2023
Condition of Sample : Drawn into one 10-L air sampling bag

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Total Hydrocarbon as Methylene	16/05/23 - 17/05/23	ppm	-	1.0	2.9	EPA 40 CFR Part 50, Appendix C	Rayong

Sampled By : Siwal Tonpho

Remark:

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

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S:\Report_Lab_Working_ML_01 (2304)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMW-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 10 of 21

Sample Number	2345565-10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		</
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Sampled By : Sawal Torpho

Remark :

- LOD : Limit of Detection
- "c" : Lower than LOQ (Limit of Quantitation) / OR (Limit of Reporting)

Approved by

Tharita Kulurivong
Scientist (r)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMW-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 11 of 21

Sample Number	2345555-11																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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Sampled By : Sawal Torpho

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- LOD : Limit of Detection
- "c" : Lower than LOQ (Limit of Quantitation) / OR (Limit of Reporting)

Approved by

Tharita Kulurivong
Scientist (r)

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RIGHT SOLUTIONS RIGHT PARTNER

1990-2612 ENGL

S:\Report\Lab_Reporting_ML_P1 (23094)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 12 of 21

Sample Number	2345565-12						
Sampled Date	May 19, 2023						
Sample Description	Air Quality						
Location	thamurung						
Date Analysis Commenced	May 25, 2023						
Condition of Sample	Drawn into one 10-L air sampling bag						
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Total Hydrocarbon as Methane	19/05/23 - 20/05/23	ppm	-	1.0	3.2	EPA 40 CFR Part 50, Appendix C	Rayong

Sampled By : Sawal Tonpho

Remark :

- LOD : Limit of Detection
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Tharitat.

Thanita Kulurwong
Scientist (S)

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1900-2611 (PNA)

S.Baornit_Ur_Worabai_MG-Lab (236PM)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 13 of 21

Sample Number	2345565-13						
Sampled Date	May 20, 2023						
Sample Description	Air Quality						
Location	Thamurung						
Date Analysis Commenced	May 25, 2023						
Condition of Sample	Drawn into one 10-L air sampling bag						
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Total Hydrocarbon as Methane	20/05/23 - 21/05/23	ppm	-	1.0	3.1	EPA 40 CFR Part 50, Appendix C	Rayong

Sampled By : Sawal Tonpho

Remark :

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

Approved by

Tharitat.

Thanita Kulurwong
Scientist (S)

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S.Baornit_Ur_Worabai_MG-Lab (236PM)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMN-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565

Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 14 of 21

Sample Number	2345565-14	Sampled Date	May 24, 2023	Sample Description	Air Quality	Location	ท่งนิคมอุตสาหกรรม (1) (Thungnitham)	Date Analysis Commenced	May 25, 2023	Condition of Sample	Drawn into one 10-L air sampling bag
Analyte		Sampled Date/Time		Unit	LOD	LOQ (LOR)	Result	Method		Testing Location	
Air Testing											
Total Hydrocarbon as Methane		21/05/23 - 22/05/23		ppm	-	1.0	4.8	EPA-40 CFR Part 50, Appendix C		Rayong	

Sampled By : Sawal Tonpho

Remark :

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Approved by

Tharita Kulburiwong
Scientist (4)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMN-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565

Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 15 of 21

Sample Number	2345565-15	Sampled Date	May 15, 2023	Sample Description	Air Quality	Location	ท่งนิคมอุตสาหกรรม (1) (Thungnitham)	Date Analysis Commenced	May 25, 2023	Condition of Sample	Drawn into one 10-L air sampling bag
Analyte		Sampled Date/Time		Unit	LOD	LOQ (LOR)	Result	Method		Testing Location	
Air Testing											
Total Hydrocarbon as Methane		15/05/23 - 16/05/23		ppm	-	1.0	3.0	EPA-40 CFR Part 50, Appendix C		Rayong	

Sampled By : Sawal Tonpho

Remark :

- LOD : Limit of Detection
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Tharita Kulburiwong
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Thailand 21150
P/O : PMN-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 16 of 21

Sample Number	2345565-16						
Sample Date	May 16, 2023						
Sample Description	Air Quality						
Location	กรุงเทพมหานคร (Thailand)						
Date Analysis Commenced	May 25, 2023						
Condition of Sample	Drawn into one 10-L air sampling bag						
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Total Hydrocarbon as Methane	16/05/23 - 17/05/23	ppm	-	1.0	3.0	EPA 40 CFR Part 50, Appendix C	Rayong

Sampled By : Sawal Tonpho

Remark :

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Tharitat.

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Analysis / Test Report

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Thailand 21150
P/O : PMN-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 17 of 21

Sample Number	2345565-17								
Sample Date	May 17, 2023								
Sample Description	Air Quality								
Location	เขตเมืองใหญ่ (ใน กรุงเทพมหานคร)								
Date Analysis Commenced	May 25, 2023								
Condition of Sample	Drawn into one 10-L air sampling bag								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location		
Air Testing									
Total Hydrocarbon as Methane	17/05/23 - 18/05/23	ppm	-	1.0	4.2	EPA 40 CFR Part 50, Appendix C	Rayong		

Sampled By : Sawal Tonpho

Remark :

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P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565

Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 18 of 21

Sample Number	2345565-18						
Sampled Date	May 18, 2023						
Sample Description	Air Quality						
Location	ถนนวิภาวดี ๓๖ กรุงเทพมหานคร						
Date Analysis Commenced	May 25, 2023						
Condition of Sample	Drawn into one 10-L air sampling bag						
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Total Hydrocarbon as Methane	18/05/23 - 19/05/23	ppm	-	1.0	4.7	EPA 40 CFR Part 50, Appendix C	Rayong

Sampled By : Sawal Tonpho

Remark :
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P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565

Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 19 of 21

Sample Number	2345565-19								
Sample Date	May 19, 2023								
Sample Description	Air Quality								
Location	ทามานาบุท (๑๑ ทามานาบุท)								
Date Analysis Commenced	May 25, 2023								
Condition of Sample	Drawn into one 10-L air sampling bag								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location		
Air Testing									
Total Hydrocarbon as Methane	19/05/23 - 20/05/23	ppm	-	1.0	4.5	EPA 40 CFR Part 50, Appendix C	Rayong		

Sampled By : Sawal Tonpho

Remark :
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P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 20 of 21

Sample Number	2345565-20						
Sampled Date	May 20, 2023						
Sample Description	Air Quality						
Location	ถนนวิภาวดี (ในบริเวณ)						
Date Analysis Commenced	May 25, 2023						
Condition of Sample	Drawn into one 10-L air sampling bag						
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
Total Hydrocarbon as	20/05/23 - 21/05/23	ppm	-	1.0	3.1	EPA 40 CFR Part 50, Appendix C	Rayong

Sampled By : Sawal Tonpho

Remark:

- LOD : Limit of Detection
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Approved by

Tharitat.
Thanita Kulsurwong
Scientist (4)

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1980-261/2564

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Analysis / Test Report

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Thailand 21150
P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345565
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631350-1

Page 21 of 21

Sample Number	2345565-21								
Sampled Date	May 21, 2023								
Sample Description	Air Quality								
Location	ถนนวิภาวดี (ในบริเวณ)								
Date Analysis Commenced	May 25, 2023								
Condition of Sample	Drawn into one 10-L air sampling bag								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location		
Air Testing									
Total Hydrocarbon as	21/05/23 - 22/05/23	ppm	-	1.0	4.4	EPA 40 CFR Part 50, Appendix C	Rayong		

Sampled By : Sawal Tonpho

Remark:

- LOD : Limit of Detection
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Approved by

Tharitat.
Thanita Kulsurwong
Scientist (4)

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Thailand 21150
P/O : PMM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345756
Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631339-1

Page 1 of 7

Sample Number : 2345756-1
Sample Date : May 15, 2023
Sample Description : Air Quality
Location : Tsatthunhuuauhu
Date Analysis Commenced : May 25, 2023
Condition of Sample : Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated
Barometric Pressure : 759 mmHg
Atmospheric Temperature : 30.0 °C

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing						
n-Hexane	ppm	-	0.10	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	ppm	-	1.0	<1.0	Based on ASTM, D212-18	Bangkok

Sampled By : Sawal Tongpho

Remark :

- LOD : Limit of Detection
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Approved by

Orawan R.

Orawan Ranyong
Scientist (3)

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S.089825-1-01 Working (MS-701) (4/2024)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345756
Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631339-1

Page 2 of 7

Sample Number : 2345756-2
Sample Date : May 16, 2023
Sample Description : Air Quality
Location : Tsatthunhuuauhu
Date Analysis Commenced : May 25, 2023
Condition of Sample : Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated
Barometric Pressure : 759 mmHg
Atmospheric Temperature : 31.0 °C

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing						
n-Hexane	ppm	-	0.10	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	ppm	-	1.0	<1.0	Based on ASTM, D212-18	Bangkok

Sampled By : Sawal Tongpho

Remark :

- LOD : Limit of Detection
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Approved by

Orawan R.

Orawan Ranyong
Scientist (3)

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S.089825-1-01 Working (MS-701) (4/2024)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
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Thailand 21150
P/O : PMK-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345756

Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631329-1

Page 2 of 7

Sample Number 2345756-3
Sample Date May 17, 2023
Sample Description Air Quality
Location Thai Phuthunsaewu
Date Analysis Commenced May 25, 2023
Condition of Sample Drawn into one 25L air sampling bag and two sorbent tubes, refrigerated
Barometric Pressure 759 mmHg
Atmospheric Temperature 32.0 °C

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Hexane	17/05/23 - 18/05/23	ppm	-	0.10	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	17/05/23 - 18/05/23	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

Sampled By : Sawal Tongpho

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Orawan Rakyoung
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Thailand 21150
P/O : PMK-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345756

Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631329-1

Page 4 of 7

Sample Number 2345756-4
Sample Date May 18, 2023
Sample Description Air Quality
Location Thai Phuthunsaewu
Date Analysis Commenced May 25, 2023
Condition of Sample Drawn into one 25L air sampling bag and two sorbent tubes, refrigerated
Barometric Pressure 759 mmHg
Atmospheric Temperature 32.0 °C

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Hexane	18/05/23 - 19/05/23	ppm	-	0.10	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	18/05/23 - 19/05/23	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

Sampled By : Sawal Tongpho

Remark :

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Orawan Rakyoung
Scientist (3)

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Thailand 21150
P/O : PMM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345756
Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631339-1

Page 5 of 7

Sample Number	2345756-5											
Sample Date	May 19, 2023											
Sample Description	Air Quality											
Location	ตำบลบ้านนาหว้า											
Date Analysis Commenced	May 25, 2023											
Condition of Sample	Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated											
Barometric Pressure	759 mmHg											
Atmospheric Temperature	33.0 °C											
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location					
Air Testing	19/05/23 - 20/05/23	ppm	-	0.10	<0.10	Based on NIOSH, 1500	Bangkok					
n-Heptane	19/05/23 - 20/05/23	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok					
Propylene												

Sampled By : Sawal Tonpho

Remark :

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Approved by

Orawan R.

Orawan Rakyong
Scientist (3)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345756
Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631339-1

Page 6 of 7

Sample Number	2345756-6					
Sampled Date	May 20, 2023					
Sample Description	Air Quality					
Location	Tsuangfuruvauthu					
Date Analysis Commenced	May 25, 2023					
Condition of Sample	Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated					
Barometric Pressure	759 mmHg					
Atmospheric Temperature	32.0 °C					
Analyte	Sampled Date/Time	Unit	LOQ (LOB)	Result	Method	Testing Location
Air Testing	20/05/23 - 21/05/23	ppm	-	0.10	<0.10	Based on NIOSH, 1500
n-Heptane	20/05/23 - 21/05/23	ppm	-	1.0	<1.0	Based on ASTM, D2712-18
Propylene						

Sampled By : Sawal Tonpho

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

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Thailand 21150
P/O : PMM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345756

Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631339-1

Page 2 of 7

Sample Number 2345756-7
Sampled Date May 21, 2023
Sample Description Air Quality
Location Test facility (โรงงาน)
Date Analysis Commenced May 25, 2023
Condition of Sample Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated
Barometric Pressure 759 mmHg
Atmospheric Temperature 33.0 °C

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Hexane	21/05/23 - 22/05/23	ppm	-	0.10	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	21/05/23 - 22/05/23	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

Sampled By : Sawal Tonpho

Remark :

- LOD : Limit of Detection
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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
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Thailand 21150
P/O : PMM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345757

Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631335-1

Page 1 of 7

Sample Number 2345757-1
Sampled Date May 15, 2023
Sample Description Air Quality
Location Test facility (โรงงาน)
Date Analysis Commenced May 25, 2023
Condition of Sample Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated
Barometric Pressure 759 mmHg
Atmospheric Temperature 30.0 °C

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Hexane	15/05/23 - 16/05/23	ppm	-	0.10	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	15/05/23 - 16/05/23	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

Sampled By : Sawal Tonpho

Remark :

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

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
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Thailand 21150
P/O : PMW-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345757
Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631335-1

Page 3 of 7

Sample Number 2345757-2
Sample Date May 16, 2023
Sample Description Air Quality
Location ตำบลบ้านใหม่ (Tambon Bang Nue)
Date Analysis Commenced May 25, 2023
Condition of Sample Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated
Barometric Pressure 759 mmHg
Atmospheric Temperature 31.0 °C

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Heptane	16/05/23 - 17/05/23	ppm	-	0.10	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	16/05/23 - 17/05/23	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

Sampled By : Sawai Tonpiko

Remark :

- LOD : Limit of Detection
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Approved by

Orawan R.
Orawan Rakying
Scientist (3)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMW-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345757
Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631335-1

Page 3 of 7

Sample Number 2345757-3
Sample Date May 17, 2023
Sample Description Air Quality
Location ตำบลบ้านใหม่ (Tambon Bang Nue)
Date Analysis Commenced May 25, 2023
Condition of Sample Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated
Barometric Pressure 759 mmHg
Atmospheric Temperature 32.0 °C

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Heptane	17/05/23 - 18/05/23	ppm	-	0.10	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	17/05/23 - 18/05/23	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

Sampled By : Sawai Tonpiko

Remark :

- LOD : Limit of Detection
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Orawan Rakying
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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
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Thailand 21150
P/O : PHM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345757

Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631335-1

Page 4 of 7

Sample Number 2345757-4
Sample Date May 18, 2023
Sample Description Air Quality
Location Thai Phatthana (Taisanagayit)
Date Analysis Commenced May 25, 2023
Condition of Sample Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated
Barometric Pressure 759 mmHg
Atmospheric Temperature 32.0 °C

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Heptane	18/05/23 - 19/05/23	ppm	-	0.10	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	18/05/23 - 19/05/23	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

Sampled By : Sawai Tonpho

Remark :

- LOD : Limit of Detection
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Thailand 21150
P/O : PHM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345757

Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631335-1

Page 5 of 7

Sample Number 2345757-5
Sample Date May 19, 2023
Sample Description Air Quality
Location Thai Phatthana (Taisanagayit)
Date Analysis Commenced May 25, 2023
Condition of Sample Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated
Barometric Pressure 759 mmHg
Atmospheric Temperature 33.0 °C

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing							
n-Heptane	19/05/23 - 20/05/23	ppm	-	0.10	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	19/05/23 - 20/05/23	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

Sampled By : Sawai Tonpho

Remark :

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- °C : Lower than LOQ (Unit of Quantification) / LOR (Unit of Reporting)

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Orawan Rakpong
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Thailand 21150
P/O : PMW-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345757
Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number: 2631335-1

Page 6 of 7

Sample Number	2345757-6						
Sample Date	May 20, 2023						
Sample Description	Air Quality						
Location	โรงงานอุตสาหกรรม (Industrial Area)						
Date Analysis Commenced	May 25, 2023						
Condition of Sample	Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated						
Barometric Pressure	759 mmHg						
Atmospheric Temperature	32.0 °C						
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOB)	Result	Method	Testing Location
Air Testing							
n-Heptane	20/05/23 - 21/05/23	ppm	-	0.10	<0.10	Based on NIOSH, 1500	Bangkok
Propylene	20/05/23 - 21/05/23	ppm	-	1.0	<1.0	Based on ASTM, D2712-18	Bangkok

Sampled By : Sewai Tonphio

Remark :

- LOD : Limit of Detection
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Approved by

Orawan R.
Orawan Rakying
Scientist (3)

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Thailand 21150
P/O : PMW-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345757
Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number: 2631335-1

Page 7 of 7

Sample Number	2345757-7					
Sampled Date	May 21, 2023					
Sample Description	Air Quality					
Location	Foodmuhuanthue (Linnasagayras)					
Date Analysis Commenced	May 25, 2023					
Condition of Sample	Drawn into one 25-L air sampling bag and two sorbent tubes, refrigerated					
Barometric Pressure	759 mmHg					
Atmospheric Temperature	33.0 °C					
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method
Air Testing						
n-Hexane	21/05/23 - 22/05/23	ppm	-	0.10	<0.10	Based on NIOSH, 1500
Propylene	21/05/23 - 22/05/23	ppm	-	1.0	<1.0	Based on ASTM, D2712-18
						Bangkok

Sampled By : Sewai Tonphio

Remark :

- LOD : Limit of Detection
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Orawan Rakying
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P/O : PMM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345118

Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number: 2631282-1

Page 1 of 1

Sample Description	Air Quality	2345118-1	2345118-2	2345118-3	2345118-4	2345118-5	2345118-6	2345118-7
Location	1st Industrial Estate TPE (Site 1)							
Parameter	Nitrogen dioxide (ppm)							
Measurement Date	May 15, 2023 - May 22, 2023							
Measurement by	Sawal Tonpho							

Time	2345118-1	2345118-2	2345118-3	2345118-4	2345118-5	2345118-6	2345118-7
11:00 AM - 12:00 PM	0.009	0.014	0.014	0.004	0.003	0.001	0.001
12:00 PM - 01:00 PM	0.004	0.007	0.012	0.004	0.004	0.002	<0.001
01:00 PM - 02:00 PM	0.001	0.002	0.009	0.003	0.004	0.001	<0.001
02:00 PM - 03:00 PM	0.001	0.002	0.005	0.003	0.004	0.002	0.001
03:00 PM - 04:00 PM	0.001	0.003	0.004	0.002	0.004	0.001	<0.001
04:00 PM - 05:00 PM	0.001	0.003	0.004	0.004	0.005	0.003	<0.001
05:00 PM - 06:00 PM	0.001	0.003	0.005	0.005	0.006	0.003	<0.001
06:00 PM - 07:00 PM	0.003	0.003	0.005	0.006	0.006	0.002	<0.001
07:00 PM - 08:00 PM	0.011	0.004	0.007	0.006	0.008	0.002	0.001
08:00 PM - 09:00 PM	0.015	0.006	0.010	0.006	0.008	<0.001	<0.001
09:00 PM - 10:00 PM	0.012	0.006	0.018	0.008	0.014	<0.001	<0.001
10:00 PM - 11:00 PM	0.014	0.010	0.014	0.008	0.015	<0.001	0.001
11:00 PM - 12:00 AM	0.012	0.016	0.012	0.011	0.014	0.002	<0.001
12:00 AM - 01:00 AM	0.012	0.010	0.011	0.014	0.012	0.001	0.001
01:00 AM - 02:00 AM	0.009	0.013	0.011	0.012	0.012	0.001	0.001
02:00 AM - 03:00 AM	0.009	0.009	0.010	0.012	0.010	<0.001	0.001
03:00 AM - 04:00 AM	0.008	0.008	0.008	0.008	0.011	<0.001	0.001
04:00 AM - 05:00 AM	0.003	0.008	0.008	0.007	0.008	<0.001	<0.001
05:00 AM - 06:00 AM	0.005	0.007	0.007	0.006	0.007	0.001	0.002
06:00 AM - 07:00 AM	0.011	0.006	0.006	0.003	0.006	0.002	0.005
07:00 AM - 08:00 AM	0.012	0.007	0.008	0.004	0.008	0.002	0.006
08:00 AM - 09:00 AM	0.012	0.008	0.009	0.008	0.008	0.002	0.003
09:00 AM - 10:00 AM	0.012	0.011	0.010	0.008	0.008	0.002	0.002
10:00 AM - 11:00 AM	0.013	0.012	0.007	0.005	0.005	0.001	0.002
Average	0.008	0.008	0.009	0.006	0.008	0.002	0.001
1hr - Maximum	0.015	0.016	0.018	0.014	0.015	0.003	0.006
Standard 1hr - Average	0.170	0.170	0.170	0.170	0.170	0.170	0.170

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

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1906-2017/ALM



Analysis / Test Report

Client: Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate E-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345193

Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number: 2631284-1

Page 1 of 1

Sample Description	Air Quality	2345193-1	2345193-2	2345193-3	2345193-4	2345193-5	2345193-6	2345193-7
Location	1st Industrial Estate TPE (Site 1)							
Parameter	Nitrogen dioxide (ppm)							
Measurement Date	May 15, 2023 - May 22, 2023							
Measurement by	Sawal Tonpho							

Time	2345193-1	2345193-2	2345193-3	2345193-4	2345193-5	2345193-6	2345193-7
10:00 AM - 11:00 AM	0.010	0.024	0.016	0.009	0.009	0.011	0.010
11:00 AM - 12:00 PM	0.012	0.021	0.016	0.011	0.012	0.010	0.008
12:00 PM - 01:00 PM	0.010	0.013	0.014	0.007	0.009	0.009	0.006
01:00 PM - 02:00 PM	0.010	0.013	0.014	0.009	0.010	0.008	0.006
02:00 PM - 03:00 PM	0.010	0.013	0.015	0.012	0.011	0.009	0.008
03:00 PM - 04:00 PM	0.012	0.019	0.014	0.016	0.014	0.010	0.010
04:00 PM - 05:00 PM	0.014	0.016	0.013	0.016	0.017	0.012	0.009
05:00 PM - 06:00 PM	0.010	0.018	0.013	0.014	0.015	0.012	0.005
06:00 PM - 07:00 PM	0.013	0.022	0.017	0.018	0.017	0.013	0.002
07:00 PM - 08:00 PM	0.021	0.026	0.020	0.017	0.017	0.014	0.004
08:00 PM - 09:00 PM	0.015	0.021	0.017	0.013	0.016	0.012	0.003
09:00 PM - 10:00 PM	0.009	0.015	0.014	0.011	0.012	0.008	0.009
10:00 PM - 11:00 PM	0.007	0.011	0.014	0.011	0.008	0.007	0.005
11:00 PM - 12:00 AM	0.009	0.011	0.011	0.011	0.006	0.007	0.003
12:00 AM - 01:00 AM	0.006	0.009	0.009	0.006	0.005	0.003	0.004
01:00 AM - 02:00 AM	0.005	0.009	0.009	0.006	0.013	0.004	0.002
02:00 AM - 03:00 AM	0.012	0.008	0.009	0.009	0.008	0.003	0.003
03:00 AM - 04:00 AM	0.005	0.008	0.008	0.007	0.008	0.003	0.005
04:00 AM - 05:00 AM	0.021	0.007	0.007	0.008	0.014	0.005	0.005
05:00 AM - 06:00 AM	0.030	0.009	0.012	0.011	0.018	0.010	0.007
06:00 AM - 07:00 AM	0.008	0.013	0.014	0.013	0.018	0.012	0.009
07:00 AM - 08:00 AM	0.009	0.019	0.015	0.015	0.014	0.013	0.013
08:00 AM - 09:00 AM	0.009	0.022	0.013	0.013	0.012	0.011	0.013
09:00 AM - 10:00 AM	0.008	0.020	0.010	0.014	0.012	0.010	0.005
Average	0.011	0.015	0.013	0.011	0.012	0.009	0.006
1hr - Maximum	0.030	0.026	0.020	0.018	0.018	0.014	0.013
Standard 1hr - Average	0.170	0.170	0.170	0.170	0.170	0.170	0.170

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

The above results are valid only for the unaltered sample(s) as indicated in the Laboratory Report. The results are not to be used for any other purpose without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced in any form.

Approved by
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Orawan Rakyong
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S:Report_Air_SONOLUP (1-22PM)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345673

Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number: 2631287-1

Page 1 of 1

Sample Description	Air Quality	2345673-1	2345673-2	2345673-3	2345673-4	2345673-5	2345673-6	2345673-7
Location	Ben Map Ta Phut School (Tannawangkyuay)							
Parameter	Nitrogen dioxide (ppm)							
Measurement Date	May 15, 2023 - May 22, 2023							
Measurement by	Sawal Tompho							
Time	09:00 AM - 10:00 AM	0.003	0.002	0.002	0.001	<0.001	<0.001	<0.001
	10:00 AM - 11:00 AM	0.002	0.002	0.002	0.011	<0.001	<0.001	0.002
	11:00 AM - 12:00 PM	0.002	0.001	<0.001	<0.001	<0.001	<0.001	0.004
	12:00 PM - 01:00 PM	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.005
	01:00 PM - 02:00 PM	0.002	<0.001	0.001	<0.001	<0.001	<0.001	0.006
	02:00 PM - 03:00 PM	0.002	<0.001	0.002	0.001	<0.001	<0.001	0.007
	03:00 PM - 04:00 PM	0.001	0.002	0.004	0.003	<0.001	<0.001	0.006
	04:00 PM - 05:00 PM	0.002	0.002	0.004	0.003	0.001	0.002	0.003
	05:00 PM - 06:00 PM	0.003	0.003	0.005	0.003	0.003	0.002	0.001
	06:00 PM - 07:00 PM	0.003	0.005	0.005	0.003	0.002	0.002	<0.001
	07:00 PM - 08:00 PM	0.003	0.005	0.004	0.002	0.001	0.002	<0.001
	08:00 PM - 09:00 PM	0.002	0.003	0.003	0.002	<0.001	<0.001	<0.001
	09:00 PM - 10:00 PM	0.002	0.003	0.003	0.002	<0.001	0.001	<0.001
	10:00 PM - 11:00 PM	0.002	0.002	0.002	0.002	<0.001	<0.001	<0.001
	11:00 PM - 12:00 AM	0.002	0.002	0.002	0.002	<0.001	0.002	<0.001
	12:00 AM - 01:00 AM	0.002	0.002	0.002	0.001	<0.001	<0.001	<0.001
	01:00 AM - 02:00 AM	0.002	0.002	0.002	<0.001	<0.001	<0.001	<0.001
	02:00 AM - 03:00 AM	0.001	0.002	0.002	<0.001	<0.001	<0.001	<0.001
	03:00 AM - 04:00 AM	0.001	0.002	0.001	<0.001	<0.001	<0.001	<0.001
	04:00 AM - 05:00 AM	0.017	0.002	0.001	<0.001	<0.001	<0.001	0.002
	05:00 AM - 06:00 AM	0.001	0.001	0.001	<0.001	<0.001	0.001	0.002
	06:00 AM - 07:00 AM	0.001	0.002	0.001	<0.001	<0.001	0.001	0.002
	07:00 AM - 08:00 AM	0.001	0.003	0.001	<0.001	<0.001	<0.001	0.002
	08:00 AM - 09:00 AM	0.002	0.003	0.001	<0.001	<0.001	<0.001	0.002
Average		0.003	0.002	0.002	0.002	<0.001	0.001	0.002
1hr - Maximum		0.018	0.005	0.005	0.011	0.003	0.003	0.007
Standard 1hr - Average		0.170	0.170	0.170	0.170	0.170	0.170	0.170
Standard								
Reference Method	: US EPA Method Part 50 App. F (Chromium Resonance)							

The above results are valid only for the analyzed/checked 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) Company Limited. This report is not representative of a full analysis.

Approved by

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Orawan Rakying
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19062018/ENAL

S.Vepanda_AJ_SchNayap (3.30PM)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345185

Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number: 2631295-1

Page 1 of 2

Sample Number	2345185-1	Sampled Date	May 15, 2023	Sample Description	Air Quality
Location	Ben Map Ta Phut School (Tannawangkyuay)	Date Analysis Commenced	May 25, 2023	Condition of Sample	Drawn into one 10L air sampling bag
Analyte	Non-Methane Hydrocarbon	Unit	ppm	LOQ	1.0
Air Testing		Result	<1.0	Method	EPA 40 CFR Part 50, Appendix C
Non-Methane Hydrocarbon		LOQ (LOR)	1.0	Testing Location	Rayong
Sampled By	Sawal Tompho				
Remark	- LOD : Limit of Detection - "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)				

Approved by

Thanitak.
Thanita Kulurimong
Scientist (4)

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19062018/ENAL

S.Vepanda_AJ_SchNayap (2.30PM)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMW-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345185
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631295-1

Page 2 of 7

Sample Number	2345185-2
Sampled Date	May 16, 2023
Sample Description	Air Quality
Location	Ban Map Ta Phut School (Tannaragayruw)
Date Analysis Commenced	May 25, 2023
Condition of Sample	Drawn into one 10-L air sampling bag
Analyte	
Air Testing	
Non-Methane Hydrocarbon	16/05/23 - 17/05/23
Unit	ppm
LOD	-
LOQ (LOR)	1.0
Result	<1.0
Method	EPA-40 CFR Part 50, Appendix C
Testing Location	Rayong

Sampled By : Sawal Tongpho

Remark :

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

Approved by

Tharitat.
Tharita Kulsurikwong
Scientist (1)

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190-261/004

S. Rajaratnam, M. Srinivasan, M. Srinivasan



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMW-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345185
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631295-1

Page 3 of 7

Sample Number	2345185-3
Sampled Date	May 17, 2023
Sample Description	Air Quality
Location	Ban Map Ta Phut School (Tannaragayruw)
Date Analysis Commenced	May 25, 2023
Condition of Sample	Drawn into one 10-L air sampling bag
Analyte	
Air Testing	
Non-Methane Hydrocarbon	17/05/23 - 18/05/23
Unit	ppm
LOD	-
LOQ (LOR)	1.0
Result	<1.0
Method	EPA-40 CFR Part 50, Appendix C
Testing Location	Rayong

Sampled By : Sawal Tongpho

Remark :

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

Approved by

Tharitat.
Tharita Kulsurikwong
Scientist (1)

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190-261/004

S. Rajaratnam, M. Srinivasan, M. Srinivasan



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PHM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345185
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2633295-1

Page 4 of 7

Sample Number	2345185-4	Sampled Date	May 18, 2023	Sample Description	Air Quality	Location	Ban Map Ta Phut School (Banmaptaphuayue)	Date Analysis Commenced	May 25, 2023	Condition of Sample	Drawn into one 10-L air sampling bag
Analyte		Sampled Date/Time		Unit	LOD	LOQ (LOR)	Result	Method	Testing Location		
Air Testing											
Non-Methane Hydrocarbon		18/05/23 - 19/05/23		ppm	-	1.0	<1.0	EPA 40 CFR Part 50, Appendix C	Rayong		

Sampled By : Sawal Tongpho

Remark :

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

Approved by

Thanitak
Thanita Kulsurawong
Scientist (4)

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1990-361 (ENH)

S4800001_04_060404_001 (2.31PM)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PHM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345185
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2633295-1

Page 5 of 7

Sample Number	2345185-5	Sampled Date	May 19, 2023	Sample Description	Air Quality	Location	Ban Map Ta Phut School (Banmaptaphuayue)	Date Analysis Commenced	May 25, 2023	Condition of Sample	Drawn into one 10-L air sampling bag
Analyte		Sampled Date/Time		Unit	LOD	LOQ (LOR)	Result	Method	Testing Location		
Air Testing											
Non-Methane Hydrocarbon		19/05/23 - 20/05/23		ppm	-	1.0	<1.0	EPA 40 CFR Part 50, Appendix C	Rayong		

Sampled By : Sawal Tongpho

Remark :

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

Approved by

Thanitak
Thanita Kulsurawong
Scientist (4)

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1990-361 (ENH)

S4800001_04_060404_001 (2.31PM)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMW-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345185
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631295-1

Page 6 of 7

Sample Number	2345185-6						
Sampled Date	May 20, 2023						
Sample Description	Air Quality						
Location	Ban Map Ta Phut School (Tannaragajana)						
Date Analysis Commenced	May 25, 2023						
Condition of Sample	Drawn into one 10-L air sampling bag						
Analyte	Sampled Date/time	LOD	Unit	LOQ (LOQ)	Result	Method	Testing Location
Air Testing							
Non-Methane Hydrocarbon	20/05/23 - 21/05/23	-	ppm	1.0	1.5	EPA-40 CFR Part 50, Appendix C	Rayong

Sampled By : Sawal Tonpho

Remark :

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

Approved by

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1980-261/FINAL

S:\Report_Mr_Yodhag_MLJst (23194)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMW-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345185
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631295-1

Page 7 of 7

Sample Number	2345185-7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Sampled By : Sawal Tonpho

Remark :

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

Approved by

Tharitat.
Tharita Kulsirwong
Scientist (4)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345188

Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631288-1

Page 1 of 7

Sample Number	2345188-1
Sampled Date	May 15, 2023
Sample Description	Air Quality
Location	Testfourthunuaahu
Date Analysis Commenced	May 25, 2023
Condition of Sample	Drawn into one 10-L air sampling bag
Analyte	
Air Testing	
Non-Methane Hydrocarbon	15/05/23 - 16/05/23
Unit	ppm
LOD	-
LOQ (LOR)	1.0
Result	<1.0
Method	EPA 40 CFR Part 50, Appendix C
Testing Location	Rayong

Sampled By : Sawal Tongpho

Remark :

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

Tharitat.

Approved by

Thantia Kulurwong
Scientist (4)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345188

Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631288-1

Page 2 of 7

Sample Number	2345188-2
Sampled Date	May 16, 2023
Sample Description	Air Quality
Location	Testfourthunuaahu
Date Analysis Commenced	May 25, 2023
Condition of Sample	Drawn into one 10-L air sampling bag
Analyte	
Air Testing	
Non-Methane Hydrocarbon	16/05/23 - 17/05/23
Unit	ppm
LOD	-
LOQ (LOR)	1.0
Result	<1.0
Method	EPA 40 CFR Part 50, Appendix C
Testing Location	Rayong

Sampled By : Sawal Tongpho

Remark :

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

Tharitat.

Approved by

Thantia Kulurwong
Scientist (4)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate E-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345188-3
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631288-1

Page 3 of 7

Sample Number	2345188-3	Sampled Date	May 17, 2023	Sampled Date/Time	17/05/23 - 18/05/23	Unit	ppm	LOD	LOQ (LOR)	Result	Method	Testing Location
Sample Description	Air Quality	Location	Tsifounthunsaethu	Date Analysis Commenced	May 25, 2023	Condition of Sample	Drawn into one 10-L air sampling bag					
Analyte	Non-Methane Hydrocarbon											
Air Testing												
Non-Methane Hydrocarbon												

Sampled By : Sawal Tonphio

Remark :

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

Approved by

Tharitat.
Thaniha Kulsurwong
Scientist (4)

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1906-2611/24ML

S.Vijayalakshmi, M.Sc., Ph.D., (2020)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate E-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345188
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631288-1

Page 4 of 7

Sample Number	2345188-4	Sampled Date	May 18, 2023	Sampled Date/Time	18/05/23 - 19/05/23	Unit	ppm	LOD	LOQ (LOR)	Result	Method	Testing Location
Sample Description	Air Quality	Location	Tsifounthunsaethu	Date Analysis Commenced	May 25, 2023	Condition of Sample	Drawn into one 10-L air sampling bag					
Analyte	Non-Methane Hydrocarbon											
Air Testing												
Non-Methane Hydrocarbon												

Sampled By : Sawal Tonphio

Remark :

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

Approved by

Tharitat.
Thaniha Kulsurwong
Scientist (4)

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1906-2611/24ML

S.Vijayalakshmi, M.Sc., Ph.D., (2020)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMK-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345188
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631288-1

Page 6 of 7

Sample Number : 2345188-5
Sample Date : May 19, 2023
Sample Description : Air Quality
Location : เทศบาลเมืองมาบตาพุด
Date Analysis Commenced : May 25, 2023
Condition of Sample : Drawn into one 10-L air sampling bag

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing						
Non-Methane Hydrocarbon	ppm	-	1.0	1.2	EPA 40 CFR Part 50, Appendix C	Rayong

Sampled By : Sawal Tongpho

Remark :
- LOD : Limit of Detection
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Tharita Kulnirwong
Scientist (4)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMK-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345188
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631288-1

Page 6 of 7

Sample Number : 2345188-6
Sample Date : May 20, 2023
Sample Description : Air Quality
Location : เทศบาลเมืองมาบตาพุด
Date Analysis Commenced : May 25, 2023
Condition of Sample : Drawn into one 10-L air sampling bag

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air Testing						
Non-Methane Hydrocarbon	ppm	-	1.0	<1.0	EPA 40 CFR Part 50, Appendix C	Rayong

Sampled By : Sawal Tongpho

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

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Analysis / Test Report

Lot ID: 2345190
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number: 2631290-1

P/O : PNIM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

page 3 of 7

Sample Number	Sampled Date	Sample Description	Location	Date Analysis Commenced	Condition of Sample	Analyte	Unit	LOD	LOQ (LOEL)	Result	Method	Testing Location
2345190-3	May 17, 2023	Air Quality	อากาศในภาชนะบรรจุที่วางบน TPE (Site 1)	May 25, 2023	Drawn into one 10-L air sampling bag							
						Non-Methane Hydrocarbon	ppm	-	1.0	<1.0	EPA 40 CFR Part 50, Appendix C	Rayong

Sampled By : Sawal Tonpho

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

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345190
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631290-1

Page 4 of 2

Sample Number	2345190-4						
Sampled Date	May 18, 2023						
Sample Description	Air Quality						
Location	บริเวณหน้าโรงงาน TPE (Site 1)						
Date Analysis Commenced	May 25, 2023						
Condition of Sample	Drawn into one 10-L air sampling bag						
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Air-Testing							
Non-Methane Hydrocarbon	18/05/23 - 19/05/23	ppm	-	1.0	1.1	EPA 40 CFR Part 50, Appendix C	Rayong

Sampled By : Sawal Tonpho

Remark :

- LOD : Limit of Detection
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Thanita Kulburiwong
Scientist (4)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345190
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631290-1

Page 5 of 2

Sample Number	2345190-5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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Sampled By : Sawal Tonpho

Remark :

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

Approved by

Thanitak.

Thanita Kulburiwong
Scientist (4)

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1980-24/1/2024

S:\Report\LAJ-Wedding_ML-23\23090



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345190
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631290-1

Page 5 of 7

Sample Number	2345190-6						
Sampled Date	May 20, 2023						
Sample Description	Air Quality						
Location	อากาศในโรงงานอุตสาหกรรม TPE (Site 1)						
Date Analysis Commenced	May 25, 2023						
Condition of Sample	Drawn into one 10-L air sampling bag						
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOB)	Result	Method	Testing Location
Air Testing							
Non-Methane Hydrocarbon	20/05/23 - 21/05/23	ppm	-	1.0	<1.0	EPA-40 CFR part 50, Appendix C	Rayong

Sampled By : Sawai Tonpho

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

Approved by

Thanitak.
Thanita Kulburiwong
Scientist (4)

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1980-2611 (DNA)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID: 2345190
Date Received : May 24, 2023
Date Reported : May 30, 2023
Report Number : 2631290-1

Page 7 of 7

Sample Number	2345190-7								
Sampled Date	May 21, 2023								
Sample Description	Air Quality								
Location	อากาศในโรงงานอุตสาหกรรม TPE (Site 1)								
Date Analysis Commenced	May 25, 2023								
Condition of Sample	Drawn into one 10-L air sampling bag								
Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOB)	Result	Method		Testing Location	
Air Testing									
Non-Methane Hydrocarbon	21/05/23 - 22/05/23	ppm	-	1.0	2.2	EPA-40 CFR Part 50, Appendix C		Rayong	

Sampled By : Sawai Tonpho

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

Approved by

Thanitak.
Thanita Kulburiwong
Scientist (4)

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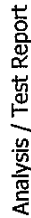
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1980-2611 (DNA)

S:\Report\Air Working_M02-2023



P/O : PMM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Page 1 of 2

0000741	ANALYTICAL	978
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Reference Method : On Anemometer & Anoxized Aluminium Vane Method

Approved by _____

Sarayuth Jiltranont
Assistant General Manager

Khwaeng Phatthana, Khet Suk Lueang, Bangkok 10250 Thailand
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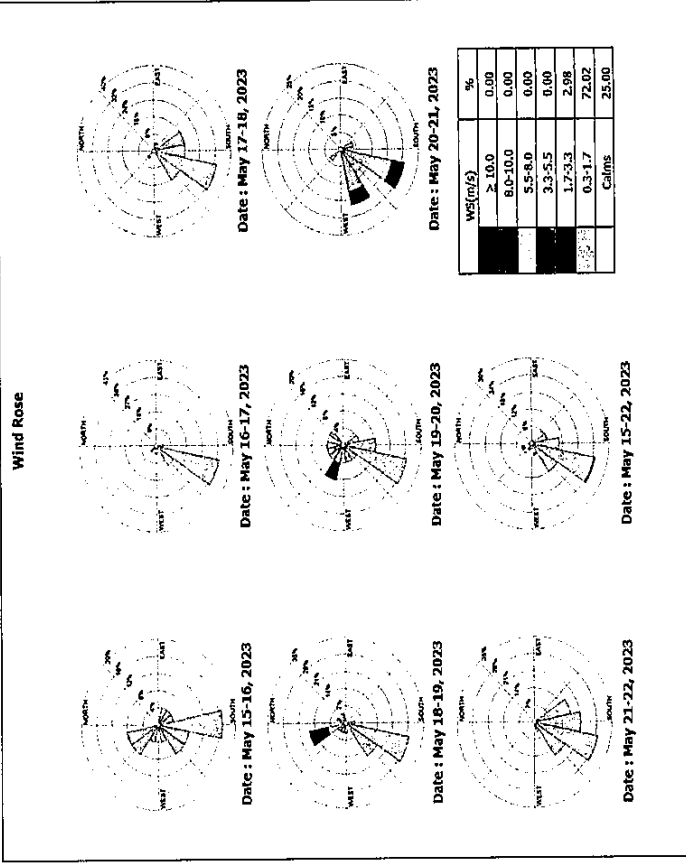
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Analysis / Test Report

Lot ID : 2345563
Date Received : Mar
Date Reported : Jun
Report Number : 266

Page 2 of 2



Approved by

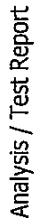
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Assistant General Manager

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Sample Number	2345566-1 to 7
Parameter	Wind Speed / Wind Direction
Location	ตำบลบ้านนาหลวง (ตามตรอกทุ่ง)
Sampling Date	May 15 - May 22, 2023
Sampling by	Sawal Tonpho

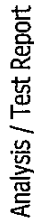
Sample Number	2345566-1 to 7
Parameter	Wind Speed / Wind Direction
Location	ตำบลบ้านนาหลวง (ตามตรอกทุ่ง)
Sampling Date	May 15 - May 22, 2023
Sampling by	Sawal Tonpho

Time	May 15 - May 16, 2023		May 16 - May 17, 2023		May 17 - May 18, 2023		May 18 - May 19, 2023		May 19 - May 20, 2023		May 20 - May 21, 2023		May 21 - May 22, 2023								
	WS (deg)	WD (deg)	WS (deg)	WD (deg)	WS (deg)	WD (deg)	WS (deg)	WD (deg)	WS (deg)	WD (deg)	WS (deg)	WD (deg)	WS (deg)	WD (deg)							
09:30 AM - 10:00 AM	0.0	-	1.0	270.0	ENE	0.5	332.0	NNW	0.8	268.0	W	1.9	119.0	ESE	0.9	331.0	NNW	0.3	348.0	NNW	
10:00 AM - 11:00 AM	0.4	16.0	NNE	0.1	355.0	SSE	0.8	346.0	SW	2.3	0.0	N	1.8	294.0	NNW	1.1	172.0	5	1.2	334.0	NNW
11:00 AM - 12:00 PM	1.2	39.0	N	0.2	-	3.5	131.0	SE	1.0	256.0	WSW	0.8	346.0	WNW	2.2	20.0	W	1.9	211.0	SSW	
12:00 PM - 01:00 PM	0.9	35.0	N	0.2	-	0.6	367.0	NNW	0.4	282.0	NNW	2.2	323.0	NW	2.3	312.0	NW	0.2	-	-	
01:00 PM - 02:00 PM	0.9	142.0	SE	1.0	357.0	N	0.3	346.0	NNW	2.1	346.0	N	1.4	10.0	N	0.6	354.0	N	1.1	264.0	SSW
02:00 PM - 03:00 PM	0.4	75.0	ENE	0.9	135.0	SE	1.1	20.0	NNE	1.9	334.0	NNW	0.8	316.0	NW	1.2	301.0	NNW	0.6	216.0	SW
03:00 PM - 04:00 PM	0.7	35.0	NNE	1.3	157.0	SSE	0.4	26.0	NNE	0.2	-	2.0	376.0	NNW	1.7	300.0	NNW	0.6	216.0	SW	
04:00 PM - 05:00 PM	0.3	351.0	N	0.6	114.0	ESE	1.2	248.0	WSW	0.0	-	0.4	44.0	NE	0.8	9.0	N	0.9	276.0	S	
05:00 PM - 06:00 PM	0.4	332.0	NNW	1.2	178.0	W	1.3	200.0	SWW	0.6	7.0	N	0.2	-	0.1	-	0.8	194.0	S		
06:00 PM - 07:00 PM	0.4	350.0	N	0.1	-	0.3	330	NNE	2.2	342.0	NNW	0.6	58.0	ENE	0.4	356.0	N	0.8	40.0	NE	
07:00 PM - 08:00 PM	0.1	-	0.3	133.0	SE	0.3	59.0	ENE	0.2	-	0.6	294.0	SWW	0.4	196.0	SSW	0.4	69.0	ENE		
08:00 PM - 09:00 PM	0.0	-	0.3	135.0	SE	0.5	127.0	SE	0.4	285.0	NNW	1.4	230.0	NNW	0.2	-	0.0	-	0.0	-	
09:00 PM - 10:00 PM	0.4	200.0	SSW	0.0	-	0.3	286.0	NNW	1.1	331.0	SW	0.4	255.0	NNW	0.1	-	0.1	-	0.1	-	
10:00 PM - 11:00 PM	0.5	163.0	SSE	0.0	-	1.4	390.0	N	0.3	316.0	NNW	1.2	239.0	SW	0.2	-	0.2	-	0.2	-	
11:00 PM - 12:00 AM	0.0	-	1.1	344.0	NNW	1.0	357.0	N	0.3	321.0	NW	0.5	290.0	W	0.0	-	1.0	196.0	SSW		
12:00 AM - 01:00 AM	1.0	245.0	WSW	0.5	1.0	N	0.4	0.0	N	0.7	0.0	N	0.6	69.0	ENE	0.4	94.0	E	1.0	315.0	NW
01:00 AM - 02:00 AM	0.1	-	0.0	-	0.0	-	0.0	-	0.1	-	0.0	-	0.0	-	0.0	-	0.6	351.0	N		
02:00 AM - 03:00 AM	0.8	156.0	SSW	0.5	26.0	NNE	0.8	36.0	NE	1.4	336.0	NNW	0.1	-	0.6	114.0	ESE	0.8	242.0	WSW	
03:00 AM - 04:00 AM	0.4	81.0	E	0.3	67.0	ENE	0.5	318.0	NW	1.2	310.0	NW	1.2	316.0	NW	0.5	346.0	NNW	0.8	3.0	N
04:00 AM - 05:00 AM	0.0	-	0.0	-	0.0	-	0.5	7.0	N	32.0	NNW	0.2	-	0.6	53.0	NE	0.7	86.0	E		
05:00 AM - 06:00 AM	0.0	-	0.3	359.0	N	0.3	212.0	SSW	0.2	369.0	NW	0.0	-	0.0	-	0.0	-	0.8	331.0	NNW	
06:00 AM - 07:00 AM	0.7	55.0	E	1.3	282.0	NNW	1.5	331.0	NNW	2.5	313.0	NW	3.2	289.0	NNW	1.0	350.0	N	0.0	-	-
07:00 AM - 08:00 AM	0.2	-	0.2	-	0.0	-	1.5	317.0	N	1.3	312.0	NNW	1.0	272.0	W	0.5	336.0	NNW	0.2	-	-
08:00 AM - 09:00 AM	1.4	27.0	NNE	0.3	312.0	NW	1.5	265.0	NNW	0.2	-	1.0	1.0	N	0.7	81.0	NW	0.2	2.1	318.0	NW

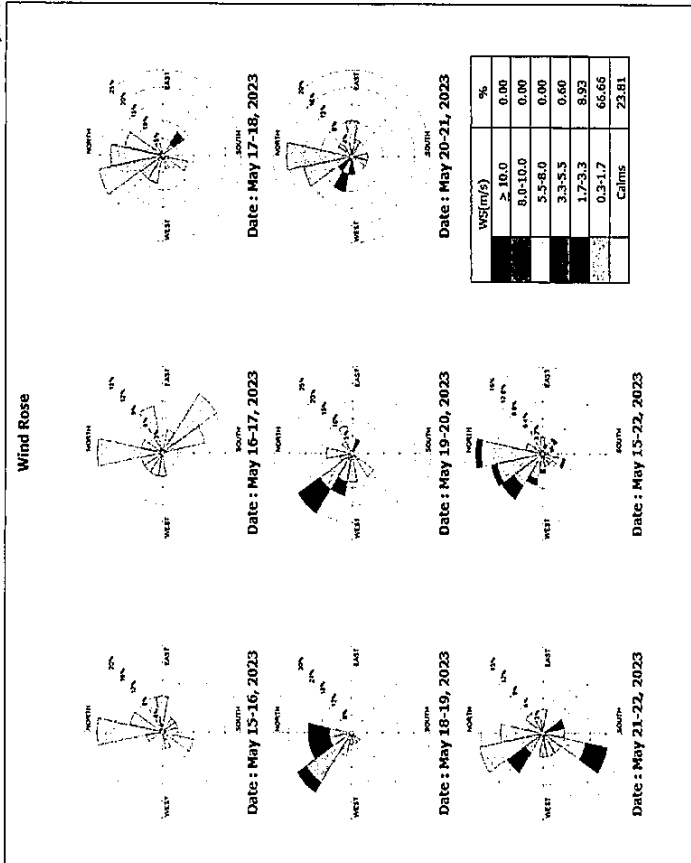
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Assistant General Manager

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Lot ID : 2345566
Date Received : May 24, 2023
Date Reported : Jun 01, 2023
Report Number : 2631340-1



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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District,
Rayong Thailand 21150
P/O : PMM-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Lot ID : 2346207

Date Received : May 24, 2023

Date Reported : Jun 01, 2023

Report Number : 2632414-1

Page 1 of 2

Sample Number : 2346207-1 to 7
Parameter : Wind Speed / Wind Direction
Location : Tsilamphunuaakhu RinnasuanThumSiutik
Sampling Date : May 15 - May 22, 2023
Sampling by : Sewal Tonpho

Time	May 15 - May 16, 2023			May 16 - May 17, 2023			May 17 - May 18, 2023			May 18 - May 19, 2023			May 19 - May 20, 2023			May 20 - May 21, 2023			May 21 - May 22, 2023		
	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	
11:00 AM - 12:00 PM	0.9	1.0	N	1.2	121.0	ESE	2.4	170.0	S	0.3	69.0	ENE	1.4	350.0	N	2.6	201.0	SSW	2.2	189.0	S
12:00 PM - 01:00 PM	1.1	354.0	N	1.5	170.0	S	1.5	230.0	WSW	1.1	290.0	WNW	0.5	27.0	NNE	1.0	270.0	W	1.1	271.0	W
01:00 PM - 02:00 PM	0.4	23.0	NNE	1.1	231.0	SW	1.5	207.0	SSW	3.0	246.0	WSW	0.7	220.0	SW	2.2	347.0	NNW	0.9	217.0	SW
02:00 PM - 03:00 PM	1.2	124.0	SE	2.1	201.0	SSW	0.9	201.0	SSW	0.7	82.0	E	1.3	181.0	S	0.6	129.0	SE	2.1	34.0	NE
03:00 PM - 04:00 PM	1.0	171.0	S	1.7	101.0	E	1.4	242.0	WSW	1.5	238.0	WSW	0.7	192.0	SSW	0.7	178.0	S	1.5	165.0	SSE
04:00 PM - 05:00 PM	1.3	85.0	E	0.5	251.0	WSW	1.0	192.0	SSW	0.9	249.0	WSW	1.2	258.0	WSW	0.9	212.0	SSW	1.9	137.0	SE
05:00 PM - 06:00 PM	3.3	92.0	E	0.7	234.0	SW	1.0	210.0	SSW	0.6	221.0	SW	1.0	200.0	SSW	2.9	202.0	SSW	2.9	157.0	SSE
06:00 PM - 07:00 PM	1.0	147.0	SSE	1.5	164.0	SSE	1.4	216.0	SW	0.8	221.0	SW	1.5	221.0	SW	4.1	177.0	S	1.7	175.0	S
07:00 PM - 08:00 PM	1.0	194.0	SSW	0.2	-	-	0.4	266.0	SSW	0.6	207.0	SSW	1.2	204.0	SSW	1.6	220.0	SW	0.9	240.0	WSW
08:00 PM - 09:00 PM	1.4	121.0	ESE	1.1	218.0	SW	1.1	244.0	WSW	0.4	208.0	SSW	0.6	212.0	SSW	1.9	201.0	SSW	1.6	197.0	SSW
09:00 PM - 10:00 PM	1.9	217.0	SW	1.5	155.0	SSE	0.9	224.0	SW	1.1	209.0	SSW	1.5	194.0	SSW	2.6	213.0	SSW	0.6	171.0	S
10:00 PM - 11:00 PM	1.0	141.0	SE	1.0	211.0	SSW	0.7	202.0	SSW	0.9	169.0	S	1.5	242.0	WSW	0.9	233.0	SW	0.9	228.0	SW
11:00 PM - 12:00 AM	0.4	192.0	SSW	1.4	230.0	SW	1.6	207.0	SSW	1.0	214.0	SW	0.8	181.0	S	1.3	246.0	WSW	2.0	191.0	S
12:00 AM - 01:00 AM	4.3	127.0	SE	1.9	229.0	SW	1.2	190.0	S	0.3	243.0	WSW	0.4	199.0	SSE	0.8	190.0	S	1.2	169.0	S
01:00 AM - 02:00 AM	4.1	277.0	WSW	0.0	-	-	1.7	212.0	SSW	0.0	-	-	0.0	-	-	0.4	235.0	SW	1.4	251.0	WSW
02:00 AM - 03:00 AM	1.3	62.0	ENE	0.4	231.0	SW	0.5	227.0	SW	0.9	230.0	SW	0.5	235.0	SW	0.0	-	-	1.4	271.0	W
03:00 AM - 04:00 AM	0.7	322.0	NW	0.0	-	-	0.1	-	-	0.3	232.0	SW	0.0	-	-	0.0	-	-	0.4	255.0	WSW
04:00 AM - 05:00 AM	0.8	98.0	E	0.0	-	-	0.0	-	-	0.0	-	-	0.8	260.0	W	0.0	-	-	0.0	-	-
05:00 AM - 06:00 AM	0.0	-	-	0.4	308.0	NW	0.0	-	-	0.0	-	-	0.0	-	-	1.1	262.0	W	0.4	263.0	WNW
06:00 AM - 07:00 AM	0.0	-	-	0.3	306.0	NW	0.4	242.0	WSW	0.0	-	-	0.0	-	-	1.9	283.0	WNW	0.3	275.0	W
07:00 AM - 08:00 AM	0.4	357.0	N	0.0	-	-	0.4	273.0	W	0.3	111.0	ESE	1.1	232.0	SW	1.4	173.0	S	1.5	261.0	W
08:00 AM - 09:00 AM	0.0	-	-	0.0	-	-	2.4	246.0	WSW	0.5	251.0	WSW	0.4	251.0	WSW	0.4	185.0	S	0.6	266.0	W
09:00 AM - 10:00 AM	0.4	69.0	ENE	0.3	277.0	SW	0.6	312.0	NW	1.2	312.0	NW	1.3	230.0	SW	0.6	216.0	SW	0.5	232.0	SW
10:00 AM - 11:00 AM	0.9	241.0	WSW	1.8	160.0	SSE	0.3	62.0	ENE	1.1	214.0	SW	1.7	359.0	N	2.2	197.0	SSW	0.9	251.0	WSW

Reference Method : Cup Anemometer & Anodized Aluminum Vane Method

The above results are valid only for the intended purpose (as stated in the scope of the contract) and are not to be used for any other purpose without written consent from the Laboratory. ALS Laboratory Group (Thailand) Limited is not responsible for any errors or omissions in the data.

Approved by

Saranyut Jitranont

Assistant General Manager

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life Sciences

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ภาคผนวก ค-2

คุณภาพน้ำทิ้ง



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-I Road, Map Ta Phut, Muang District, Rayong
Thailand 21150

P/O :
Project Name : Environmental Monitoring
Project Location: TPE Site 1

Lot ID: 23254
Date Received : Jan 06, 2023
Date Reported : Jan 13, 2023
Report Number: 2534531-2

Page 1 of 1

Sample Number	23254-1						
Sample Date	Jan 06, 2023 10:30 AM						
Sample Description	Wastewater						
Location	PP2 : Wafairtu API Separator						
Date Analysis Commenced	Jan 06, 2023						
Condition of Sample	Contained in two glass vials, one amber glass bottle and three plastic bottles, sample containers comply to petroleum - preservation standards (API, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing Chloride as Cl	mg/L	0.5	1	64	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (C)	RoYang
Flow rate	m3/s	-	-	0.006	No Standard	Flow meter	RoYang
Total Organic Carbon	mg/L	0.01	0.1	5.43	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5310 B	Bangkok

Guidelines : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and Effluent standard for harbour and industrial park set by Notification of The Ministry of Industry dated June 02, B.E. 2550 (2017).

Sampling v.v.:

Remark :
 - LOD : Limit of Detection
 - * < LOD : Lower than LOD (Limit of Quantitation) / LOD (Limit of Reporting)

Approved by

D. J. J. J. J.
Dej Changchon
Senior Manager

Approved by

N. Banerjee
Narumon Banerjee
Supervisor

any form without written consent from the
NHL.

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate E-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O :
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Page 1 of 1

Sample Number : 231125-1
Sample Date : Jan 06, 2023 10:20 AM
Sample Description : Wastewater
Location : P2 : โรงงานรีไซเคิล
Date Analysis Commenced : Jan 06, 2023
Condition of Sample : Contained in two glass vials, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Chloride as Cl	mg/L	0.5	1	33	No Standard	Standard Methods for the Examination of Water and Wastewater, 23rd ed., 2017, part 4500-Cl (D)	Rayong
Flow rate	m ³ /s	-	-	0.000	No Standard	Flow meter	Rayong
Total Organic Carbon	mg/L	0.01	0.1	5.93	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5310 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resources 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 :

Remark :
• LOD : Limit of Detection
• LOQ : Limit of Quantitation / LOQ (Limit of Reporting)

Siriluk P.

Approved by

Siriluk Pungpang
Supervisor

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S. Watanalai (S. W.)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate E-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O :
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Page 1 of 2

Sample Number : 2312994-1
Sample Date : Feb 03, 2023 11:30 AM
Sample Description : Wastewater
Location : โรงงานรีไซเคิล TPE Site #1
Date Analysis Commenced : Feb 03, 2023
Condition of Sample : Contained in four glass vials, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	3.7	≤20	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	31	≤120	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Cobor (at Original pH)	ADMI	-	5	17	≤300	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cobor (at pH 7.0)	ADMI	-	5	15	≤300	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Oil & Grease *	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C *		-	-	7.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	32.2	≤40	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	540	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	10	≤50	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

N. Banphit

Technical Management

Approved by

D. Chanchon

Nauman Banchongkit
Supervisor

visittunluang 3-23-23-9-9442

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S. Watanalai (S. W.)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O :
Project Name : Environmental Monitoring
Project Location: TPE Site 1

Page 2 of 2

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 : Paramet Sattayakun วิศณุธรรมทรัพย์ 3-323-9-9476 , Thanassou Namakunna วิศณุธรรมทรัพย์ 3-323-9-8592

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



TESTING
No.0042
Lot ID: 2312994

Date Received : Feb 03, 2023
Date Reported : Feb 10, 2023
Report Number : 255859-1



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O :
Project Name : Environmental Monitoring
Project Location: TPE Site 1

Page 1 of 1

Sample Number : 2312994-1
Sample Date : Feb 03, 2023 11:30 AM
Sample Description : Wastewater
Location : โรงงานอุตสาหกรรม TPE Site#1
Date Analysis Commenced : Feb 03, 2023
Condition of Sample : Contained in four glass vials, 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 Chloride as Cl	mg/L		0.5	1	117	No Standard	Rayong
Total Organic Carbon	mg/L		0.01	0.1	10.6	No Standard	Bangkok

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 : Paramet Sattayakun , Thanassou Namakunna

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

Technical Management

N. Bangphit
Nannorn Banchongjit
Supervisor
โทรศัพท์ 3-323-9-9445

Approved by

D. Chongchon
Dej Chongchon
Senior Manager
โทรศัพท์ 3-323-9-9442

Approved by

S. P. P.
Sittik Ponggung
Supervisor

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S. Ponggung (S. Ponggung)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150

P/O :
Date Received : J66 03, 2023
Date Reported : J66 10, 2023
Report number : 25545N-1
LOT ID: 2313018

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* UCD : Unit of declaration
 * LUC : Unit of return (LUC/Kingdom/Quintile/Region/LUC/Kingdom/Quintile/Region)
 * P : Policy : Policy included in scope of consideration (see 1502.025)
 * L : Legislation : Legislation included in scope of consideration (see 1502.025)
 * I : Information : Information included in scope of consideration (see 1502.025)
 * S : Sampling : Sampling included in scope of consideration (see 1502.025)
 * T : Test : Test included in scope of consideration (see 1502.025)
 * E : Evaluation : Evaluation included in scope of consideration (see 1502.025)
 * M : Monitoring : Monitoring included in scope of consideration (see 1502.025)
 * R : Review : Review included in scope of consideration (see 1502.025)
 * A : Assessment : Assessment included in scope of consideration (see 1502.025)
 * C : Consultation : Consultation included in scope of consideration (see 1502.025)
 * D : Decision : Decision included in scope of consideration (see 1502.025)
 * F : Follow-up : Follow-up included in scope of consideration (see 1502.025)
 * G : Guidance : Guidance included in scope of consideration (see 1502.025)
 * H : Harmonization : Harmonization included in scope of consideration (see 1502.025)
 * J : Joint : Joint included in scope of consideration (see 1502.025)
 * K : Knowledge : Knowledge included in scope of consideration (see 1502.025)
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 * P : Policy : Policy included in scope of consideration (see 1502.025)
 * Q : Quality : Quality included in scope of consideration (see 1502.025)
 * R : Review : Review included in scope of consideration (see 1502.025)
 * S : Sampling : Sampling included in scope of consideration (see 1502.025)
 * T : Test : Test included in scope of consideration (see 1502.025)
 * U : Unit : Unit included in scope of consideration (see 1502.025)
 * V : Value : Value included in scope of consideration (see 1502.025)
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 * X : Example : Example included in scope of consideration (see 1502.025)
 * Y : Year : Year included in scope of consideration (see 1502.025)
 * Z : Zone : Zone included in scope of consideration (see 1502.025)

Technical Management

N. B. Boufford
f.aunon@unichongkit.com
Supervisor
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D. Chen
Det. Changchou
Senior Manager
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Approved by _____

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E. R. Rabinovich et al. / *Advances in Difference Equations* 2014, **2014**:244

5:59:40 ports: 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150

P/O :
Project Name : Environmental Monitoring
Project Location: TPE Site 1

Lot ID: 2323410
Date Received : Mar 0F, 20ZF
Date Reported : Mar 1F, 20ZF
Report Number: 25b13FF-1

Page 1 of 2

Sample Number	2P7F310-1						
Sample Date	Mar 05, 2020 11:05 AM						
Sample Description	f aster alter						
Location	ระบบบำบัดน้ำเสีย TPE Siewm						
Date Analysis Commenced	Mar 05, 2020						
Condition of Sample	Contained in Nurf glass vials, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards WPA, (SEPAH)						
Analyte	Unit	LOD	LOQ (LOS)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
U) D 16 days at 20 Degree C	mg/L	-	2.0	72.0	≤20	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2018, part 5210 U	Rayong
C) D	mg/L	1.5	25	26	≤120	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2018, part 5220 D	Rayong
Color (wt.) original pH	ADMT	-	5	15	≤F00	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2018, part 2120 x	Rayong
Color val pH 8.0H	ADMT	-	5	13	≤F00	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2018, part 2120 x	Rayong
) H O Grease *	mg/L	-	F	7F	≤5	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2018, part 2120 x	Rayong
pH at 25 degree C *		-	-	8.k	5.5-8.0	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2018, part 5520 U	Rayong
Temperature *	Degree C	-	-	F0.<	≤30	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2018, part 3500 - # mH	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	kk3	≤F000	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2018, part 2530 U	Rayong
Total Suspended Solids Dried at 100-105 degree C	mg/L	-	5	13	≤50	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2018, part 2530 D	Rayong

Remark :
 - LOD : Limit of Detection
 - "c" : Lower than LOD (Limit of Quantitation) / LOD (Limit of Reporting)

- LOD : limit of Detection
- "c" : Lower than LOD (Limit of Quantitation) / LOQ (Limit of Reporting)

• "c" : 1 over than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Approved by _____

Barumon Uanchongjit
Supervisor
ทะเบียนเลขที่ 7-F2F-a-333

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.

10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location: TPE Site 1



TESTING

No.0042

Lot ID: 2323410

Date Received : Mar 05, 2023

Date Reported : Mar 15, 2023

Report Number: 2581433-1

Page 2 of 2

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and
enactment standard for factories and industrial park set by Notification of the Ministry of Industry dated June 07, B.E.2560 (2017).
Sampling By : Paramit Sattayakorn, Thanasorn Kerdakumma

Remark :

- LOD : Limit of Detection
- LQ : Limit of Quantitation
- LQ : Limit of Quantitation (1) R limit of Reporting
- Any new method or figure not included in scope of accreditation (S) / IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO / IEC 17025.

Technical Management

N. Banphat

Banphon Uanchoijit

Supervisor

Wichitthorn P-FJ-4-035

Approved by

D. Chumchit

Doz Chumchit

Senior Manager

Wichitthorn P-FJ-4-032

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.

10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location: TPE Site 1

Page 1 of 1

Sample Number 2323410-1

Sample Date Mar 03, 2023 11:05 AM

Sample Description Wastewater

Location โรงงานผลิตพลาสติก TPE Site#1

Date Analysis Commenced Mar 03, 2023

Condition of Sample Contained in four glass vials, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing Chloride as Cl	mg/L	0.5	1	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 100-CI (C)	Rayong
Total Organic Carbon	mg/L	0.01	0.1	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5310 B	Bangkok

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

Sampling By : Paramit Sattayakorn, Thanasorn Kerdakumma

Remark :

- LOD : Limit of Detection
- LQ : Lower than LOQ (Limit of Quantitation) / LOQ (Limit of Reporting)

Approved by

Sinluk P.

Sinluk Pungpung

Supervisor

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMN-2v-11
Project Name : Emron's ental Monitoring
Project Location : TPE Jite 1

TESTING
No.0042
Lot ID: 2323699
Date Recd : Mar 06, 202v
Date Reported : Mar 13, 202v
Report buS Fer : 254206-1

Page 1 of 6

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing Cx D 15 days at 20 Degree C8	S/g/L	-	2.0	v.5	Standard Methods for the EBS ination of water and waste, alter. APWA, AwWA F wE7, 2nd ed., 201N, part 5210 O	Rayong
Cx-D	S/g/L	1.5	25	v4	Standard Methods for the EBS ination of water and waste, alter. APWA, AwWA F wE7, 2nd ed., 201N, part 5220 D	Rayong
Color Hx original pUB	ADMT	-	5	11	Standard Methods for the EBS ination of water and waste, alter. APWA, AwWA F wE7, 2nd ed., 201N, part 2120 7	Rayong
Color Hx pU N08	ADMT	-	5	10	Standard Methods for the EBS ination of water and waste, alter. APWA, AwWA F wE7, 2nd ed., 201N, part 2120 7	Rayong
xH F <rease G	S/g/L	-	v	*v	Standard Methods for the EBS ination of water and waste, alter. APWA, AwWA F wE7, 2nd ed., 201N, part 5230 O	Rayong
pU at 25 degree C G	-	-	-	N.4	Standard Methods for the EBS ination of water and waste, alter. APWA, AwWA F wE7, 2nd ed., 201N, part 9500 - U H8	Rayong
TeS perature G	Degree C	-	-	v5.0	Standard Methods for the EBS ination of water and waste, alter. APWA, AwWA F wE7, 2nd ed., 201N, part 2550 O	Rayong
Total Dissolved Jolids Dried at 140 degree C	S/g/L	-	5	344	Standard Methods for the EBS ination of water and waste, alter. APWA, AwWA F wE7, 2nd ed., 201N, part 2590 C	Rayong
Total Suspended Jolids Dried at 10v-105 degree C	S/g/L	-	5	1v	Standard Methods for the EBS ination of water and waste, alter. APWA, AwWA F wE7, 2nd ed., 201N, part 2590 D	Rayong

Technical Management : N.Bangpit
bani on Quchongit
Juperior
widiunant 1-v2v-a-6995

Approved by : D.Changchon
Jenior Manager
widiunant 1-v2v-a-6992

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMN-2v-11
Project Name : Emron's ental Monitoring
Project Location : TPE Jite 1

TESTING
No.0042
Lot ID: 2323699
Date Recd : Mar 06, 202v
Date Reported : Mar 13, 202v
Report buS Fer : 254206-1

Page 2 of 6

Guideline : EWment standard Mr. Victoria, Industrial estate and Industrial part set fy bottomation othe Ministry ofNatural Resource and Emron's ent and
ewment standard Mr. Victoria and Industrial part set fy bottomation othe Ministry ofIndustry dated, line 0N, Q.E.2530 H01NB
Sampling BY : waniop Luchanao, widiunant 1-v2v-a-695N, Thasoon BAS abunna widiunant 1-v2v-a-4562

Res sub :
- Lx D : LUSH ewaporation
- Lx D : Lx Q LUSH it ewaporation
- Lx D : Lx Q LUSH it ewaporation
- Analytical method is not included in scope of accreditation by JREC 1A025.
- The laboratory has been accepted as an accredited laboratory by JREC 1A025.

Technical Management : N.Bangpit
bani on Quchongit
Juperior
widiunant 1-v2v-a-6995

Approved by : D.Changchon
Jenior Manager
widiunant 1-v2v-a-6992

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong Thailand 21150
P/O : PHM-23-11
Project Name : Environmental Monitoring
Project Location: TPE Site 1

Lot ID: 2323699

Date Received : Mar 09, 2023
Date Reported : Mar 16, 2023
Report Number : 2582079-2

Page 1 of 1

Sample Number	2323699-1
Sample Date	Mar 09, 2023 2:10 PM
Sample Description	Wastewater
Location	PP2 : douchu API Separator
Date Analysis Commenced	Mar 09, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						
Chloride as Cl	mg/L	0.5	1	218	No Standard	Rayong
Flow rate	m ³ /s	-	-	0.006	No Standard	Rayong
Total Organic Carbon	mg/L	0.01	0.1	11.9	No Standard	Bangkok

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).

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

Approved by

Narin Saiseng
Supervisor

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190-2611 DML

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong Thailand 21150
P/O : PHM-23-11
Project Name : Environmental Monitoring
Project Location: TPE Site 1

Lot ID: 2323702

Date Received : Mar 09, 2023
Date Reported : Mar 16, 2023
Report Number : 2582094-1

Page 1 of 1

Sample Number	2323702-1
Sample Date	Mar 09, 2023 2:20 PM
Sample Description	Wastewater
Location	PP2 : douchu API Separator
Date Analysis Commenced	Mar 09, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	Result	Method	Testing Location
Water Testing					
BOD (5 days at 20 Degree C)	mg/L	-	2.0	3.4	Rayong
COD	mg/L	1.5	25	38	Rayong
Color (at Original pH)	ADMI	-	5	12	Rayong
Color (at pH 7.0)	ADMI	-	5	10	Rayong
Oil & Grease *	mg/L	-	3	<3	Rayong
pH at 25 degree C *	-	-	-	8.0	Rayong
Temperature *	Degree C	-	-	35.7	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	716	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	10	Rayong

Sampling By : Wanlop Hunchaisaw watlunuearn 7-323-a-9457, Thanassom Namakunna watlunuearn 7-204-a-8592

Remark :
- LOD : Limit of Detection
- "L" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * before are included in scope of Accreditation ISO/IEC 17025.
- The Laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by

Dej Chumgdon
Senior Manager
watlunuearn 7-323-a-9442

Technical Management

Narumon Banchongkit
Supervisor
watlunuearn 7-323-a-9445

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong Thailand
21150
P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Sample Number : 2323702-1
Sample Date : Mar 09, 2023 2:20 PM
Sample Description : Wastewater
Location : PP2 : float/hu API Separator
Date Analysis Commenced : Mar 09, 2023
Condition of Sample : Contained in two glass vials, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Page 1 of 1

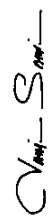
Lot ID: 2323702

Date Received : Mar 09, 2023
Date Reported : Mar 16, 2023
Report Number : 2323702-2

Analyte	Unit	LOD	LOQ (LOB)	Result	Method	Testing Location
Water Testing						
Chloride as Cl	mg/L	0.5	1	222	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (D)	Rayong
Flow rate	m ³ /s	-	-	0.000	How meter	Rayong
Total Organic Carbon	mg/L	0.01	0.1	13.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5310 B	Bangkok

Sampling By : Wanlop Hanchaisow, Thansosun Namakumna

Remark :
- LOD : Limit of Detection
- LOQ : Lower than LOQ (Limit of Quantitation) / LOB (Limit of Reporting)

Approved by 
Nait Saling
Supervisor

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Page 1 of 2




TESTING

No.0042

Lot ID: 2336510

Date Recd : Apr 06, 2024
Date Reported : Apr 11, 2024
Report 8US 96 : 2610233-1

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
U) D 16 days at 20 Degree CH	S/g/L	-	2.0	8.2.0	≤20	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 U	Rayong
Q) D	S/g/L	1.5	25	8.25	≤120	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at 10 cm) pH	ADMI	-	5	14	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5510 A	Rayong
Color (at 10 cm) pH	ADMI	-	5	11	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5510 A	Rayong
U) 107 reuse G	S/g/L	-	5	8.4	≤5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 U	Rayong
pH at 25 degree C G	-	-	-	3.6	5.5-8.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 U	Rayong
Test perature G	Degree C	-	-	30.0	≤30	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 U	Rayong
Total Dissolved Solids Dried at 180 degree C	S/g/L	-	5	160	≤1000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 U	Rayong
Total Suspended Solids Dried at 105-105 degree C	S/g/L	-	5	15	≤50	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 U	Rayong

Technical Management 
N. Banphit
Senior Manager

Approved by 
D. Chongchon
Senior Manager

YUJITUMRAT 7-VZ-11-00-02

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14-02-2023 (P)AL

F. Japorn-SAMET-LAP 11-53PM



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PM-20-11
Project Name : Environmental Monitoring
Project Location : TPE Jile 1

Guidelines : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and Pollution Control Department, Ministry of Natural Resource and Environment, dated Jan 19 1994 (MOEN 2014).

Sampling By : Purat Sri Jattayabun mullamath +62-8-3746, Pattaraporn Jiravongkiet +62-8-3709-4002

Notes are :

- US (L of Quotation)
- USD : US dollar, 100 (US dollar) / 1 L (L of US dollar)
- L : Liter, 100 (L of Quotation)
- Analytical 5 sulfide Gas/line not included in scope of Accreditation (DOJEC 14025).
- The laboratory has been accepted as an accredited laboratory (as playing with the DOJEC 14025).

Technical Management

N. Bonyhair
Nanus on Bunchongkit
J supervisor

Approved by

D. Phumma
Dek Chingchon
J enter Manager

ทะเบียนเลขที่ ว-๖๒๔-๐-๓๗๗๒

7-V2V-A-3772

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030-2647 EMAIL

1=Efficient; 2=Low; 3=Very low



Analysis / Test Report

Page 1 of 7

[illegible]

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing	BOD (5 days at 20 degree C)	5 g/L	2.0	*2.0	≤20	Flamford Methods for the Basic Inition and/or the 5-day BOD, APHA & WE7, 2nd ed., 2016, part 5210.8	Rayong
	COD	5 g/L	1.5	25	≤120	Flamford Methods for the Basic Inition and/or the 5-day BOD, APHA & WE7, 2nd ed., 2016, part 5220 D	Rayong
	Color (at Original pH)	ADMI	-	5	13	Flamford Methods for the Basic Inition and/or the 5-day BOD, APHA & WE7, 2nd ed., 2016, part 5220 D	Rayong

WASCHER, J. W., ARTHA & HELI,
2nd ed., 2015, part 2120 7
Standard Methods for the
2nd ed., 2015, part 2120 7
Standard Methods for the

Oil & grease	k	Sq/L	v	*v	≤5	Rayong
Standard Methods for the						2nd ed., 2016, part 2120 7

D. French.

Approved by

Supervisor

Dez Changchon

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جانب



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMH-24-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Page 2 of 2

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 Huanchaiwong, Pattarapol Pawaingaitan

ReS art :
- LOD : USH (US is on Quantitation) / LOR (US is on Reporting)
- ** : Lower than LOD (US is on Quantitation) / LOR (US is on Reporting)
- Analytical result is not included in scope of accreditation (ISO/IEC 17025).
- The laboratory has been accepted as an accredited laboratory complying with the PROTEC 1025.



TESTING

No.0042
Lot ID: 2345049
Date Received : May 06, 2024
Date Reported : May 13, 2024
Report 8:05 Ser : 2340202-1

Technical Management

N. Banjit
8:05 Ser : 2340202-1
Supervisor

Approved by

D. Chongchon
Dea Chongchon
Feitor Manager

10:00 Ser : 2340202-1

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100-231/ENH

P. Report Date: 2024/05/13



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : TPE Site 1

Page 1 of 1

Sample Number : 2345049-1
Sample Date : May 08, 2023 11:15 AM
Sample Description : Wastewater
Location : โรงงานผลิต TPE Site#1
Date Analysis Commenced : May 08, 2023
Condition of Sample : Contained in four glass vials, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ	Result	Guideline / Specification	Method	Testing Location
Water Testing Chloride as Cl	mg/L	0.5	1	172	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (D)	Rayong
n-Hexane	mg/L	-	0.001	<0.001	No Standard	In-house method based on United States Environmental Protection Agency, EPA Method 5030 B and 8360 D	Bangkok
Total Organic Carbon	mg/L	0.01	0.1	10.9	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5310 B	Bangkok

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 Huanchaiwong, Pattarapol Sawangitarn
Remarks :
- LOD : Limit of Detection
- LOQ : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

Siriluk P.
Siriluk Puangpiang
Supervisor

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100-231/ENH

S. Report Date: 2023/05/16



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PHM-2V-11
Project Name : EnironS ental Monitoring
Project Location: TPE Jite 1

Page 1 of 2



TESTING
No.0042
Lot ID: 2345685
Date Received : May 06, 202v
Date Reported : May 13, 202v
Report NUS ber : 23v1v04-1

Page 1 of 2

Sample Number	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
2v45305-1						
Sampled Date	May 06, 202v	NWS AM				
Sample Description	wastef ater					
Location	P2 : M8UHu API J operator					
Date Analysis Commenced	May 06, 202v					
Condition of Sample	Contained in 10 glass mels, one sS ber glass bottle and three plastic bottles, sS ple contains cOS ply to pretreats ent - preservation Solvents (HPLV, J) EPAS					
Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						
Ox D 16 days at 20 Degree CB	S g/L	-	2.0	62.0	520	Rayong
Cx D	S g/L	1.5	25	625	5120	Rayong
Color Mt x original pUB	ADN1	-	5	16	SV00	Rayong
Color Mt pu <08	ADN1	-	5	13	SV00	Rayong
xill F + reuse 9	S g/L	-	V	V	S5	Rayong
pu at 25 degree C 9		-	-	6.1	5.5-W0	Rayong
Test perature 9	Degree C	-	-	v5.6	S40	Rayong
Total Dissolved Jolids Dried at 160 degree C	S g/L	-	5	600	SV000	Rayong
Total Juspended Jolids Dried at 10v-105 degree C	S g/L	-	5	550	S50	Rayong

Technical Management

N. Banphit

Nanus on Onchongkitt
Jupersor
วณณณณณณ 2v2v-1v-W45

Approved by

D. Chongchon

Dek Chongchon
Jenior Manager
วณณณณณณ 2v2v-1v-W42

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PHM-2V1/PAL

J. Banphit/MS T. Chongchon



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PHM-2V-11
Project Name : EnironS ental Monitoring
Project Location: TPE Jite 1

Page 2 of 2



TESTING
No.0042
Lot ID: 2345685
Date Received : May 06, 202v
Date Reported : May 13, 202v
Report NUS ber : 23v1v04-1

Page 2 of 2

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 04, Q.E.2530 P01-83
Sampling By : wathop Unchainae วณณณณณณ 2v2v-1v-W5<, Patrapap Jai angkietas วณณณณณณ 2v2v-1v-0002
Recd are:
- "LOD" : Limit of Detection
- "G" : Limit or than LQ/HLS it of Quantitation/LQR HLS it of Reporting
- AnalysisBS arded 9 have not included in scope of Accreditation Dv/REC 1-025.
- The laboratory has been accepted as an accredited laboratory cos plying (in the Dv/REC 1-025.

Technical Management

N. Banphit

Nanus on Onchongkitt
Jupersor
วณณณณณณ 2v2v-1v-W45

Approved by

D. Chongchon

Dek Chongchon
Jenior Manager
วณณณณณณ 2v2v-1v-W42

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PHM-2V1/PAL

J. Banphit/MS T. Chongchon



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMW-23-11
Project Name : Environmental Monitoring
Project Location: TPE Site 1

Lot ID: 2345685
Date Received : May 08, 2023
Date Reported : May 16, 2023
Report Number: 2631304-2

Page 1 of 1

Sample Number	2345685-1			
Sample Date	May 08, 2023 9:35 AM			
Sample Description	Wastewater			
Location	PP2 : Wastewater APT Separator			
Date Analysis Commenced	May 08, 2023			
Condition of Sample	Contained in two glass vials, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)			

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						
Chloride as Cl	mg/L	0.5	1	No Standard	Standard Methods for the Examination of Water and Wastewater, 23rd ed., 2017, part 4500-Cl (D)	Rayong
Flow rate	m ³ /s	-	0.005	No Standard	Flow meter	Rayong
Total Organic Carbon	mg/L	0.01	0.1	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5310 B	Bangkok

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 Hunchanaow , Potterapong Sawangjalam

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

Approved by
Suwimon C.
Suwimon Chaiyapongvut
Scientist (3)

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1990-2611 (MAL)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMW-SCQCH-2019-343
Project Name : Environmental Monitoring
Project Location: PPI_S1

Lot ID: 2236510
Date Received : Jun 10, 2022
Date Reported : Jun 18, 2022
Report Number: 2303173-1 C3

Page 1 of 1

Sample Number	2236510-1			
Sample Date	Jun 10, 2022 11:35 AM			
Sample Description	Wastewater			
Location	โรงงานพลาสติก			
Date Analysis Commenced	Jun 10, 2022			
Condition of Sample	Contained in four glass vials, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)			

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						
BOO (5 days at 20 Degree C)	mg/L	-	2	<2	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	22	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	7	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	8	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C	-	-	-	7.3	Based on APHA (2017), 4500-H (B)	Rayong
Temperature	-	-	-	33.6	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	352	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	16	APHA (2017), 2540 D	Rayong

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

Sampling By : Wanlop Hunchanaow , Thanasoun Nankunma

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

Approved by
N.Bangnit
Nannorn Baichongkitt
Supervisor
VIRASAKUNTHA 3-323-4-0445
Manager
Dij Changchon
VIRASAKUNTHA 1-225-4-5283

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1990-2611 (MAL)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMW-SCGCH-2019-343
Project Name : Environmental Monitoring
Project Location: PPI_S1

Lot ID: 2236510

Date Received : Jun 10, 2022
Date Reported : Jun 18, 2022
Report Number: 2303173-2 C3

Page 1 of 1

Sample Number	2236510-1
Sample Date	Jun 10, 2022 11:35 AM
Sample Description	Wastewater
Location	พื้นที่เก็บน้ำ
Date Analysis Commenced	Jun 10, 2022
Condition of Sample	Contained in four glass vials, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOQ (LOW)	Result	Guideline / Specification	Method	Testing Location
Water Testing						
Chloride as Cl	mg/L	0.5	1	100	No Standard	Based on APHA (2017), 4500-Cl (O)
n-Hexane	mg/L	-	0.001	<0.001	No Standard	Based on US EPA, Method 5010B and 8260D

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

Sampled By : Wanlop Hunchaisow, Thanasoon Namakuntha

Remarks :
- LOD : Limit of Detection
- < : Lower than LOQ (Limit of Quantization) / LOQ (Limit of Reporting)

Approved by
Nant Somb
Nantawadee Somboon
Specialist 1

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1980-2610 PNL



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMW-23-11
Project Name : Environmental Monitoring
Project Location: TPE Site 1

TESTING

No.0042

Lot ID: 2355644

Date Received : Jun 01, 2023

Date Reported : Jun 10, 2023

Report Number: 2652485-1

Page 1 of 2

Sample Number	2355644-1
Sample Date	Jun 01, 2023 9:57 AM
Sample Description	Wastewater
Location	PPI : TaisiThu API Separator
Date Analysis Commenced	Jun 01, 2023
Condition of Sample	Contained in two glass vials, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOW)	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, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	29	\$120	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	18	\$300	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	16	\$300	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Oil & Grease *	mg/L	-	3	<3	\$5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C *		-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 1500 - H (9)	Rayong
Temperature *	Degree C	-	-	35.7	\$40	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	684	\$3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 100-105 degree C	mg/L	-	5	6	\$50	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Technical Management

N. Banphit
Narumon Banphongit
Supervisor

Approved by

D. J. J. J.
Daj Changchon
Senior Manager

2355644-1-323-a-9442

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1980-2610 PNL

5389661_ML_C-UP (12.31PM)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PHM-23-11
Project Name : Environmental Monitoring
Project Location: TPE Site 1



TESTING
No.0042
Lot ID: 2355644
Date Received : Jun 01, 2023
Date Reported : Jun 10, 2023
Report Number: 2652485-1

Page 3 of 3

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 Hunchainaw วิวัฒน์ หันไชยวาทย์ 3-204-4-0001

Remarks :
- LOD : Limit of Detection
- <LOD : Lower than LOD (Limit of Reporting)
- Analytical method is/are not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphit
Narumon Bandhongkiet
Supervisor

Approved by

D. Chongchon
Dej Chongchon
Senior Manager

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S:\Report\LA-GL-09 (12-2019)



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PHM-23-11
Project Name : Environmental Monitoring
Project Location: TPE Site 1

Lot ID: 2355644
Date Received : Jun 01, 2023
Date Reported : Jun 10, 2023
Report Number: 2652485-2

Page 1 of 1

Sample Number 2355644-1

Sample Date Jun 01, 2023 9:52 AM

Sample Description Wastewater

Location PP2 : WKKHTU API Separator

Date Analysis Commenced Jun 01, 2023

Condition of Sample Contained in two glass vials, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing Chloride as Cl	mg/L	0.5	1	270	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (P)	Rayong
Flow rate	m ³ /s	-	-	0.003	No Standard	Flow meter	Rayong
Total Organic Carbon	mg/L	0.01	0.1	11.2	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5310 D	Bangkok

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 Hunchainaw , Kordbundit Kirsapavant

Remarks :
- LOD : Limit of Detection
- <LOD : Lower than LOD (Limit of Reporting)

Approved by

N. Banphit
Narumon Bandhongkiet
Supervisor

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ภาคผนวก ค-3

ระดับเสียงทั่วไป



Analysis / Test Report



TESTING
No.0042

Lot ID: 2346330

Date Received : May 24, 2023

Date Reported : Jun 06, 2023

Report Number: 2664956-1C3

Client: Thai Polyethylene Co., Ltd.

10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong Thailand

21150

P/O : PMH-SGCH-2019-343

Project Name : Environmental Monitoring

Project Location : PP1

Page 1 of 1

Sample Number	2346330-1
Parameter	Noise (Leq 24 hrs.)
Location	จากบริเวณทางแยกสี่ทาง TPE Site#1
Measurement Date	May 15 - May 16, 2023
Measurement by	Sawal Tompho
Sound Level meter	Serial No. 472132

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	61.0	72.4	57.9
11:00 AM - 12:00 PM	60.4	75.5	58.1
12:00 PM - 01:00 PM	59.5	81.2	57.2
01:00 PM - 02:00 PM	60.1	73.0	57.8
02:00 PM - 03:00 PM	60.5	74.4	58.1
03:00 PM - 04:00 PM	60.7	69.8	58.6
04:00 PM - 05:00 PM	61.3	71.2	59.2
05:00 PM - 06:00 PM	60.6	80.5	59.3
06:00 PM - 07:00 PM	60.0	70.0	58.9
07:00 PM - 08:00 PM	60.0	69.0	58.8
08:00 PM - 09:00 PM	60.0	81.5	58.0
09:00 PM - 10:00 PM	59.0	68.6	58.0
10:00 PM - 11:00 PM	58.6	67.4	57.4
11:00 PM - 12:00 AM	58.9	66.9	57.6
12:00 AM - 01:00 AM	58.2	70.2	56.6
01:00 AM - 02:00 AM	62.1	87.4	58.1
02:00 AM - 03:00 AM	63.7	81.8	57.0
03:00 AM - 04:00 AM	61.8	85.5	57.5
04:00 AM - 05:00 AM	61.3	79.1	58.5
05:00 AM - 06:00 AM	61.4	76.5	59.4
06:00 AM - 07:00 AM	61.0	71.5	59.0
07:00 AM - 08:00 AM	60.4	76.1	57.5
08:00 AM - 09:00 AM	60.5	75.1	57.7
09:00 AM - 10:00 AM	60.7		

Leq Average 24 hrs. (dB(A))	60.7
Lmax (dB(A))	87.4
L90 (dB(A))	58.1
L01 (dB(A))	

Standard (dB(A))	70
Reference Method : ISO 1996-1 and 1996-2	
Standard : 1. ใช้ตามมาตรฐานวิธีทดสอบเสียงตามข้อกำหนด มอก. 2540 (พ.ร.บ. 2540) สำหรับผลการทดสอบเสียงตามข้อกำหนด	
2. ใช้ตามมาตรฐานวิธีทดสอบเสียงตามข้อกำหนด มอก. 2540 (พ.ร.บ. 2540) สำหรับผลการทดสอบเสียงตามข้อกำหนด	
Tested on: 2548	

Tharitat.

Tharita Kulsiwong

Scientist (4)

Section Head

Supot Salameh

Section Head

Approved by

Supt S.

Section Head

Supot Salameh

Section Head

Approved by

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Section Head



Analysis / Test Report

TESTING
No.0042

Lot ID: 2346330
Date Received : May 24, 2023
Date Reported : Jun 06, 2023
Report Number: 266498-1C3

Client: Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong Thailand
21150
P/O : PHM-SOCH-2019-343
Project Name : Environmental Monitoring
Project Location : PPI

Page 1 of 1

Sample Number	2346330-3
Parameter	Noise (Leq 24 hrs.)
Location	ด้านทิศใต้ของโรงงาน TPE Site#1
Measurement Date	May 17 - May 18, 2023
Measurement by	Sawal Tonpho
Sound Level meter	Serial No. 472132

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	62.8	84.6	57.3
11:00 AM - 12:00 PM	61.2	84.6	56.5
12:00 PM - 01:00 PM	58.5	74.8	55.2
01:00 PM - 02:00 PM	58.2	69.1	55.3
02:00 PM - 03:00 PM	58.6	77.0	55.4
03:00 PM - 04:00 PM	58.9	79.7	56.5
04:00 PM - 05:00 PM	59.3	76.9	56.6
05:00 PM - 06:00 PM	59.6	75.4	57.2
06:00 PM - 07:00 PM	59.6	73.4	56.7
07:00 PM - 08:00 PM	58.7	81.7	55.9
08:00 PM - 09:00 PM	57.1	73.2	55.4
09:00 PM - 10:00 PM	57.8	80.2	55.9
10:00 PM - 11:00 PM	56.9	74.1	55.4
11:00 PM - 12:00 AM	57.7	84.8	54.8
12:00 AM - 01:00 AM	56.7	71.9	55.2
01:00 AM - 02:00 AM	56.8	68.8	54.8
02:00 AM - 03:00 AM	56.5	81.5	54.6
03:00 AM - 04:00 AM	56.5	79.1	54.8
04:00 AM - 05:00 AM	57.1	76.8	54.0
05:00 AM - 06:00 AM	58.4	76.3	55.5
06:00 AM - 07:00 AM	58.0	72.4	55.1
07:00 AM - 08:00 AM	58.8	77.2	55.6
08:00 AM - 09:00 AM	57.6	85.2	55.2
09:00 AM - 10:00 AM	57.0	74.1	54.7

Leq Average 24 hrs. (dB(A))	58.6
Lmax (dB(A))	85.7
L90 (dB(A))	55.5
Ldn (dB(A))	64.0
Standard (dB(A))	70
Standard (dB(A))	115

Reference Method : ISO 9966-1 and 1996-2
Standard : 1. มาตรฐานการวัดและประเมินค่าเสียงตามอาคาร 15 (พ.ร.บ. 2540) สำหรับการประเมินผลกระทบสิ่งแวดล้อม
2. มาตรฐานการวัดและประเมินค่าเสียงตามอาคาร 15 (พ.ร.บ. 2540) สำหรับการประเมินผลกระทบสิ่งแวดล้อม
ตาม พ.ร.บ. 2548

Technical Management
Thanita Kulsurwong

Approved by

Supt S.

Supot Salameh
Section Head

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Analysis / Test Report

TESTING
No.0042

Lot ID: 2346373
Date Received : May 24, 2023
Date Reported : Jun 06, 2023
Report Number: 266498-1C3

Client: Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong Thailand
21150
P/O : PHM-SOCH-2019-343
Project Name : Environmental Monitoring
Project Location : PPI

Page 1 of 1

Sample Number	2346373-1
Parameter	Noise (Leq 24 hrs.)
Location	ด้านทิศใต้ของโรงงาน TPE Site#1
Measurement Date	May 18 - May 19, 2023
Measurement by	Sawal Tonpho
Sound Level meter	Serial No. 472132

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	57.2	74.8	54.9
11:00 AM - 12:00 PM	56.7	73.6	54.8
12:00 PM - 01:00 PM	56.4	77.0	53.9
01:00 PM - 02:00 PM	56.4	76.0	54.3
02:00 PM - 03:00 PM	56.9	72.8	54.6
03:00 PM - 04:00 PM	58.2	81.0	55.8
04:00 PM - 05:00 PM	58.1	81.0	55.3
05:00 PM - 06:00 PM	58.4	72.5	55.8
06:00 PM - 07:00 PM	58.4	74.1	55.0
07:00 PM - 08:00 PM	57.5	73.0	55.0
08:00 PM - 09:00 PM	56.9	75.4	54.5
09:00 PM - 10:00 PM	56.7	75.3	55.0
10:00 PM - 11:00 PM	56.1	71.8	54.5
11:00 PM - 12:00 AM	56.5	73.3	54.3
12:00 AM - 01:00 AM	56.4	70.8	55.4
01:00 AM - 02:00 AM	56.2	70.1	55.0
02:00 AM - 03:00 AM	56.3	77.3	53.6
03:00 AM - 04:00 AM	59.5	79.3	54.2
04:00 AM - 05:00 AM	58.0	76.9	55.5
05:00 AM - 06:00 AM	59.4	84.2	57.0
06:00 AM - 07:00 AM	59.3	82.2	56.7
07:00 AM - 08:00 AM	59.6	73.7	57.0
08:00 AM - 09:00 AM	59.3	75.3	56.5
09:00 AM - 10:00 AM	57.7		

Leq Average 24 hrs. (dB(A))	57.7
Lmax (dB(A))	84.2
L90 (dB(A))	55.0
Ldn (dB(A))	63.9
Standard (dB(A))	70
Standard (dB(A))	115

Reference Method : ISO 9966-1 and 1996-2
Standard : 1. มาตรฐานการวัดและประเมินค่าเสียงตามอาคาร 15 (พ.ร.บ. 2540) สำหรับการประเมินผลกระทบสิ่งแวดล้อม
2. มาตรฐานการวัดและประเมินค่าเสียงตามอาคาร 15 (พ.ร.บ. 2540) สำหรับการประเมินผลกระทบสิ่งแวดล้อม
ตาม พ.ร.บ. 2548

Technical Management
Thanita Kulsurwong

Approved by

Supt S.

Supot Salameh
Section Head

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TESTING
No.0042

Analysis / Test Report

Client: Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong Thailand 21150
P/O : PMH-SCGCH-2019-343
Project Name : Environmental Monitoring
Project Location : PP1

Lot ID: 2346373
Date Received : May 24, 2023
Date Reported : Jun 06, 2023
Report Number: 2664941-1C3

Page 1 of 1

Sample Number	2346373-2
Parameter	Noise (Leq 24 hrs.)
Location	อาคารสำนักงานของโรงงาน TPE Site#1
Measurement Date	May 19 - May 20, 2023
Measurement by	Sawal Tonpho
Sound Level meter	Serial No. 472132

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	57.1	81.9	54.9
11:00 AM - 12:00 PM	56.5	73.1	54.5
12:00 PM - 01:00 PM	56.3	72.1	54.0
01:00 PM - 02:00 PM	56.3	73.9	54.3
02:00 PM - 03:00 PM	54.8	71.0	52.5
03:00 PM - 04:00 PM	56.4	75.8	54.4
04:00 PM - 05:00 PM	58.1	76.7	55.4
05:00 PM - 06:00 PM	57.5	77.3	55.8
06:00 PM - 07:00 PM	57.9	72.5	55.6
07:00 PM - 08:00 PM	57.8	74.3	56.2
08:00 PM - 09:00 PM	56.3	68.9	55.2
09:00 PM - 10:00 PM	56.9	69.9	55.9
10:00 PM - 11:00 PM	56.4	67.1	55.3
11:00 PM - 12:00 AM	56.1	62.5	55.1
12:00 AM - 01:00 AM	55.7	68.0	54.6
01:00 AM - 02:00 AM	56.0	74.1	54.9
02:00 AM - 03:00 AM	55.1	64.3	54.4
03:00 AM - 04:00 AM	54.3	69.0	53.6
04:00 AM - 05:00 AM	56.1	72.3	53.6
05:00 AM - 06:00 AM	56.6	75.9	54.3
06:00 AM - 07:00 AM	57.2	74.3	54.1
07:00 AM - 08:00 AM	56.6	73.3	54.0
08:00 AM - 09:00 AM	56.8	72.9	54.0
09:00 AM - 10:00 AM	56.9	75.4	53.3
Leq Average 24 hrs. (dB(A))	56.6	81.9	54.4
Lmax (dB(A))			
L90 (dB(A))			
L01 (dB(A))	62.6	115	

Standard (dB(A)) : ISO1996-1 and 1996-2
Reference Method : ISO1996-1 and 1996-2
Standard : 1. วิธีการทดสอบการวัดค่าเสียงตามข้อกำหนด 15 (พ.ร.บ. 2540) เพื่อหาขนาดของโรงงานอุตสาหกรรม
2. วิธีการทดสอบการวัดค่าเสียงตามข้อกำหนด 15 (พ.ร.บ. 2540) เพื่อหาขนาดของโรงงานอุตสาหกรรม

Technical Management : *Tharitak*
Approved by : *Supt S.*

Tharitak Kulsriwong
Scientist (4)

Supot Salameh
Section Head

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Analysis / Test Report

Client: Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong Thailand 21150
P/O : PMH-SCGCH-2019-343
Project Name : Environmental Monitoring
Project Location : PP1

Lot ID: 2346373
Date Received : May 24, 2023
Date Reported : Jun 06, 2023
Report Number: 2664942-1C3

Page 1 of 1

Sample Number	2346373-3
Parameter	Noise (Leq 24 hrs.)
Location	อาคารสำนักงานของโรงงาน TPE Site#1
Measurement Date	May 20 - May 21, 2023
Measurement by	Sawal Tonpho
Sound Level meter	Serial No. 472132

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	56.8	80.6	53.6
11:00 AM - 12:00 PM	58.2	90.8	54.0
12:00 PM - 01:00 PM	57.8	85.5	54.3
01:00 PM - 02:00 PM	57.5	78.3	54.9
02:00 PM - 03:00 PM	57.2	78.4	54.6
03:00 PM - 04:00 PM	57.5	73.7	54.9
04:00 PM - 05:00 PM	57.7	72.1	55.5
05:00 PM - 06:00 PM	58.3	83.0	56.3
06:00 PM - 07:00 PM	58.3	75.6	56.3
07:00 PM - 08:00 PM	57.9	71.6	56.1
08:00 PM - 09:00 PM	56.9	72.6	55.6
09:00 PM - 10:00 PM	56.9	70.0	55.5
10:00 PM - 11:00 PM	56.4	72.9	55.4
11:00 PM - 12:00 AM	58.2	78.7	55.1
12:00 AM - 01:00 AM	58.3	72.0	55.3
01:00 AM - 02:00 AM	58.1	63.0	55.3
02:00 AM - 03:00 AM	58.4	63.3	55.4
03:00 AM - 04:00 AM	57.1	71.1	54.9
04:00 AM - 05:00 AM	57.1	70.4	55.0
05:00 AM - 06:00 AM	58.0	77.9	56.4
06:00 AM - 07:00 AM	58.8	78.2	56.4
07:00 AM - 08:00 AM	59.1	83.9	56.7
08:00 AM - 09:00 AM	59.0	81.9	56.4
09:00 AM - 10:00 AM	57.5		
Leq Average 24 hrs. (dB(A))	57.5	90.8	55.3
Lmax (dB(A))			
L90 (dB(A))	63.4	115	
L01 (dB(A))	70		

Standard (dB(A)) : ISO1996-1 and 1996-2
Reference Method : ISO1996-1 and 1996-2
Standard : 1. วิธีการทดสอบการวัดค่าเสียงตามข้อกำหนด 15 (พ.ร.บ. 2540) เพื่อหาขนาดของโรงงานอุตสาหกรรม
2. วิธีการทดสอบการวัดค่าเสียงตามข้อกำหนด 15 (พ.ร.บ. 2540) เพื่อหาขนาดของโรงงานอุตสาหกรรม

Technical Management : *Tharitak*
Approved by : *Supt S.*

Tharitak Kulsriwong
Scientist (4)

Supot Salameh
Section Head

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Analysis / Test Report



TESTING
No.0042

Client: Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong Thailand
21150
P/O : PMH-SC001-2019-543
Project Name : Environmental Monitoring
Project Location : PP1

Lot ID: 2346373
Date Received : May 24, 2023
Date Reported : Jun 06, 2023
Report Number: 2664943-1C3

Page 1 of 1

Sample Number	2346373-4
Parameter	Noise (Leq 24 hrs.)
Location	บริเวณถนนสายน้ำใส TPE Site#1
Measurement Date	May 21 - May 22, 2023
Measurement by	Sawai Tongbo
Sound Level meter	Serial No. 472132

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	59.3	72.4	56.7
11:00 AM - 12:00 PM	59.0	73.0	56.2
12:00 PM - 01:00 PM	56.2	71.6	54.6
01:00 PM - 02:00 PM	56.6	72.8	54.9
02:00 PM - 03:00 PM	56.0	71.6	53.7
03:00 PM - 04:00 PM	56.5	73.6	54.0
04:00 PM - 05:00 PM	56.5	70.7	52.2
05:00 PM - 06:00 PM	56.5	75.5	54.1
06:00 PM - 07:00 PM	57.8	76.4	55.1
07:00 PM - 08:00 PM	57.2	71.0	55.5
08:00 PM - 09:00 PM	57.6	72.2	55.3
09:00 PM - 10:00 PM	57.0	74.0	55.9
10:00 PM - 11:00 PM	56.0	68.6	54.9
11:00 PM - 12:00 AM	56.1	69.6	55.6
12:00 AM - 01:00 AM	56.6	68.8	55.0
01:00 AM - 02:00 AM	55.8	62.2	54.8
02:00 AM - 03:00 AM	55.4	67.7	54.3
03:00 AM - 04:00 AM	55.7	73.8	54.6
04:00 AM - 05:00 AM	54.8	64.0	54.1
05:00 AM - 06:00 AM	54.0	68.7	53.3
06:00 AM - 07:00 AM	55.8	72.0	53.3
07:00 AM - 08:00 AM	56.3	75.6	54.0
08:00 AM - 09:00 AM	56.9	74.0	53.8
09:00 AM - 10:00 AM	56.3	73.0	53.7

Leq Average 24 hrs. (dB(A))	56.6
Lmax (dB(A))	81.6
L90 (dB(A))	54.3
L01 (dB(A))	
Standard (dB(A))	115

Reference Method : ISO 1996-1 and 1996-2
Standard : 1. ปริมาณการปล่อยเสียงจากแหล่งกำเนิดเสียง (Max. 2500) ที่อยู่ในพื้นที่ชุมชนหรือใกล้ชุมชน
2. ปริมาณการปล่อยเสียงจากแหล่งกำเนิดเสียง (Max. 2500) ที่อยู่ในพื้นที่ชุมชนหรือใกล้ชุมชน
โดยมี พ.ร.บ. 2546

Technical Management : *Tharitat.* Approved by : *Supt S.*
Tharita Kulkarni Wong Scientist (I) Suport Submanah Section Head

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ภาคผนวก ค-4

คุณภาพอากาศในสถานประกอบการ



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O :
Project Name : Environmental Monitoring
Project Location : PP2

Lot ID: 237500

Date Received : Feb 09, 2023
Date Reported : Feb 18, 2023
Report Number : 2558980-1

Page 1 of 3

Sample Number 237500-1
Sample Date Feb 08, 2023
Sample Description Air Quality
Location wuttwatana
Date Analysis Commenced Feb 10, 2023
Condition of Sample Drawn into two 10-L air sampling bags and one sorbent tube, refrigerated
Barometric Pressure 758 mmHg
Atmospheric Temperature 32.0 °C

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Ethylene	09:30 AM - 11:30 AM	ppm	-	1.0	<1.0	200	Based on ASTM, D 2712-91	ACGIH	Bangkok
n-Heptane	09:30 AM - 11:30 AM	ppm	-	0.03	<0.03	500	NIOSH (1994), 1500	MOL	Bangkok
Propylene	09:30 AM - 11:30 AM	ppm	-	1.0	<1.0	500	Based on ASTM, D 2712-91	ACGIH	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 (2022).

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 : Natthapon Jengwarewong

Remark :

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

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Approved by

Orawan R.

Orawan Ranyong
Scientist (3)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location : PP2

Lot ID: 237500

Date Received : Feb 09, 2023
Date Reported : Feb 18, 2023
Report Number : 2558980-1

Page 2 of 3

Sample Number 237500-2

Sample Date Feb 08, 2023

Sample Description Air Quality

Location wuttwatana

Date Analysis Commenced Feb 10, 2023

Condition of Sample Drawn into one filter paper placed in plastic cassette

Barometric Pressure 758 mmHg

Atmospheric Temperature 32.0 °C

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Total Dust	10:00 AM - 12:00 PM	mg/m3	-	0.15	<0.15	15	Based on NIOSH (1994), 0500	OSHA	Rayong

Guideline :

OSHA : Occupational Safety and Health Administration

Sampled By : Natthapon Jengwarewong

Remark :

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

Approved by

Orawan R.

Orawan Ranyong
Scientist (3)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O :
Project Name : Environmental Monitoring
Project Location : PP2

Lot ID: 237500

Date Received : Feb 09, 2023
Date Reported : Feb 18, 2023
Report Number : 2558980-1

Page 3 of 3

Sample Number : 237500-3
Sampled Date : Feb 09, 2023
Sample Description : Air Quality
Location : Extruder (vibuladua)
Date Analysis Commenced : Feb 10, 2023
Condition of Sample : Drawn into two 10-L air sampling bags and one sorbent tube, refrigerated
Barometric Pressure : 758 mmHg
Atmospheric Temperature : 32.0 °C

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing								
Ethylene	09:30 AM - 11:30 AM	ppm	-	1.0	<1.0	200	Based on ASTM, D 2712-91	ACGIH Bangkok
n-Heptane	09:30 AM - 11:30 AM	ppm	-	0.03	0.36	500	NIOSH (1994), 1500	MOL Bangkok
Propylene	09:30 AM - 11:30 AM	ppm	-	1.0	<1.0	500	Based on ASTM, D 2712-91	ACGIH 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 (2022).
MOL : A Laboratory 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 : Nattapong Jengwarewong

Remark :

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

Approved by **Orawan R.**
Orawan Kikyoung
Scientist (3)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong
Thailand 21150
P/O : PMK-23-11
Project Name : Environmental Monitoring
Project Location : PP2

Lot ID: 2345666

Date Received : Jun 01, 2023
Date Reported : Jun 14, 2023
Report Number : 2631272-1

Page 1 of 3

Sample Number : 2345666-1
Sampled Date : May 31, 2023
Sample Description : Air Quality
Location : vibuladua
Date Analysis Commenced : Jun 02, 2023
Condition of Sample : Drawn into one 10-L air sampling bag and one sorbent tube, refrigerated
Barometric Pressure : 755 mmHg
Atmospheric Temperature : 32.0 °C

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing								
Ethylene	10:00 AM - 12:00 PM	ppm	-	1.0	<1.0	200	Based on ASTM, D 2712-91	ACGIH Bangkok
n-Heptane	10:00 AM - 12:00 PM	ppm	-	0.03	0.07	500	NIOSH (1994), 1500	MOL Bangkok
Propylene	10:00 AM - 12:00 PM	ppm	-	1.0	<1.0	500	Based on ASTM, D 2712-91	ACGIH 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 (2022).
MOL : A Laboratory 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 : Nattawat Sarin

Remark :

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

Approved by **Sanya C.**
Sanya Chalermlamrong
Scientist (1)

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ภาคผนวก ค-5

ระดับเสียงในสถานประกอบการ



Analysis / Test Report

Client: Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong Thailand 21150
P/O :
Project Name : Environmental Monitoring
Project Location : PP2

Lot ID: 2313163

Date Received : Feb 09, 2023
Date Reported : Feb 14, 2023
Report Number: 2568244-1

Page 1 of 1

Sample Number	2313163-1		
Parameter	Noise (Leq 8 hrs.)		
Location	บริเวณหน้าโรงงาน		
Measurement Date	Feb 08, 2023		
Measurement by	Nattapon Jengwarewong		
Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:23 AM - 09:23 AM	82.6	87.9	81.9
09:23 AM - 10:23 AM	82.9	90.7	81.4
10:23 AM - 11:23 AM	82.7	87.4	81.1
11:23 AM - 12:23 PM	82.7	88.0	82.0
12:23 PM - 01:23 PM	82.6	87.6	81.3
01:23 PM - 02:23 PM	82.6	87.0	80.8
02:23 PM - 03:23 PM	82.8	87.8	81.5
03:23 PM - 04:23 PM	82.8	86.7	81.4

Technical Management
Thairat.
Thairat Kulsurwong
Scientist (4)

Approved by

Supt S.
Supt Salmitth
Section Head

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S:\Report\Air Noise\pp2 (10.55AM)

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Analysis / Test Report

Client: Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong Thailand 21150
P/O :
Project Name : Environmental Monitoring
Project Location : PP2

Lot ID: 2313163

Date Received : Feb 09, 2023
Date Reported : Feb 14, 2023
Report Number: 2568245-1

Page 1 of 1

Sample Number	2313163-2		
Parameter	Noise (Leq 8 hrs.)		
Location	บริเวณหน้าโรงงาน		
Measurement Date	Feb 08, 2023		
Measurement by	Nattapon Jengwarewong		
Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:12 AM - 09:12 AM	83.0	92.4	82.6
09:12 AM - 10:12 AM	83.1	88.8	82.7
10:12 AM - 11:12 AM	82.9	89.8	82.4
11:12 AM - 12:12 PM	83.4	87.6	82.7
12:12 PM - 01:12 PM	83.3	91.5	82.9
01:12 PM - 02:12 PM	83.5	89.6	83.1
02:12 PM - 03:12 PM	83.4	90.1	83.0
03:12 PM - 04:12 PM	83.3	88.1	82.9

Technical Management
Thairat.
Thairat Kulsurwong
Scientist (4)

Approved by

Supt S.
Supt Salmitth
Section Head

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S:\Report\Air Noise\pp2 (10.55AM)

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong Thailand 21150
Lot ID: 2313163
Date Received : Feb 09, 2023
Date Reported : Feb 14, 2023
Report Number : 2560246-1

Page 1 of 1

P/O :
Project Name : Environmental Monitoring
Project Location : PP2

Sample Number : 2313163-3
Parameter : Noise (Leq 8 hrs.)
Location : Compressor (Vinaux Vent Gas use Nitrogen)
Measurement Date : Feb 08, 2023
Measurement by : Nattapong Jangwarewong

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:42 AM - 09:42 AM	76.5	83.7	76.2
09:42 AM - 10:42 AM	76.5	83.7	76.3
10:42 AM - 11:42 AM	76.3	79.7	76.0
11:42 AM - 12:42 PM	76.2	77.0	75.9
12:42 PM - 01:42 PM	76.3	80.2	76.0
01:42 PM - 02:42 PM	76.5	79.4	76.3
02:42 PM - 03:42 PM	76.5	81.9	76.3
03:42 PM - 04:42 PM	77.1	79.9	76.4

Leq Average 8 hrs. (dB(A)) : 76.5
Lmax (dB(A)) : 83.7
Standard (dB(A)) : 90
Reference Method : ISO1996-1 and 1996-2
Standard : มาตรฐานการกำหนดค่าการวัดเสียงตามข้อกำหนดของกรมส่งเสริมการค้าระหว่างประเทศ
Turntable: มาตรฐานการวัดเสียงตามข้อกำหนดของกรมส่งเสริมการค้าระหว่างประเทศ

Technical Management : Tharitat.
Tharita Kulsurawong
Scientist (P)

Approved by : Supt S.
Sujot Sakarnith
Section Head

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Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong Thailand 21150
Lot ID: 2322564
Date Received : Mar 10, 2023
Date Reported : Mar 14, 2023
Report Number : 2579028-1

Page 1 of 1

P/O :
Project Name : Environmental Monitoring
Project Location :

Sample Number : 2322564-1
Sample Date : Mar 09, 2023
Sample Description : Polymerization Unit
Location : Polymerization Unit
Personal Sampling : Mar 13, 2023
Date Analysis Commenced : Mar 13, 2023

Analyte	Sampled Date/Time	Unit	LOD	LOQ (LOQ)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	07:30 AM - 07:30 PM	%	-	-	16.2	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	07:30 AM - 07:30 PM	%	-	1	15.5	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	07:30 AM - 07:30 PM	dB(A)	-	-	75.1	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	07:30 AM - 07:30 PM	dB(A)	-	-	76.9	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

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

Sampled By : Nattapong Jangwarewong

Remark :
- LOD : Limit of Detection
- LOQ : Limit of Quantitation / LOQ (Limit of Reporting)
- * : Lower than LOQ (Limit of Quantitation) / LOQ (Limit of Reporting)

Approved by : Wichan Chinnarat
Wichan Chinnarat
Assistant Manager

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Analysis / Test Report

Client: Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong Thailand 21150
P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : PP2
Lot ID: 2345671
Date Received : Jun 01, 2023
Date Reported : Jun 08, 2023
Report Number: 2676209-1

Page 1 of 1

Sample Number	2345671-1			
Parameter	Noise (Leq 8 hrs.)			
Location	บริเวณด้านซ้ายของถนน			
Measurement Date	May 31, 2023			
Measurement by	นันทวัฒน์ ศรีม			
Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))	
09:26 AM - 10:26 AM	83.2	84.3	82.7	
10:26 AM - 11:26 AM	83.1	84.3	82.8	
11:26 AM - 12:26 PM	83.1	84.2	82.6	
12:26 PM - 01:26 PM	83.2	84.3	82.6	
01:26 PM - 02:26 PM	83.3	84.6	82.6	
02:26 PM - 03:26 PM	83.1	84.1	82.5	
03:26 PM - 04:26 PM	83.1	84.1	82.6	
04:26 PM - 05:26 PM	83.2	84.2	82.7	

Reference Method : ISO 1996-1 and 1996-2
Standard : กรมส่งเสริมการค้าระหว่างประเทศ (สำหรับโรงงานอุตสาหกรรม)
Turnittsolutions (สำหรับโรงงานอุตสาหกรรม)

Technical Management
Tharitat.
Thanita Kulurwong
Scientist (4)
Approved by
Supt S.
Supt Salunth
Section Head

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1992-2611 P940L



Analysis / Test Report

Client: Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong Thailand 21150
P/O : PMH-23-11
Project Name : Environmental Monitoring
Project Location : PP2
Lot ID: 2345671
Date Received : Jun 01, 2023
Date Reported : Jun 08, 2023
Report Number: 2676210-1

Page 1 of 1

Sample Number	2345671-2		
Parameter	Noise (Leq 8 hrs.)		
Location	บริเวณด้านซ้ายของถนน		
Measurement Date	May 31, 2023		
Measurement by	นันทวัฒน์ ศรีม		
Time			
09:43 AM - 10:43 AM	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:43 AM - 11:43 AM	82.7	97.0	81.8
11:43 AM - 12:43 PM	82.2	84.0	81.9
12:43 PM - 01:43 PM	82.1	83.5	81.7
01:43 PM - 02:43 PM	82.1	82.3	81.5
02:43 PM - 03:43 PM	82.3	83.7	81.7
03:43 PM - 04:43 PM	82.3	87.2	81.8
04:43 PM - 05:43 PM	82.5	83.5	82.1
	82.6	83.8	82.2

Reference Method : ISO 1996-1 and 1996-2
Standard : กรมส่งเสริมการค้าระหว่างประเทศ (สำหรับโรงงานอุตสาหกรรม)
Turnittsolutions (สำหรับโรงงานอุตสาหกรรม)

Technical Management
Tharitat.
Thanita Kulurwong
Scientist (4)
Approved by
Supt S.
Supt Salunth
Section Head

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S:\Report\Air Noise\pdf (E-5849)
1992-2611 P940L



Analysis / Test Report

Client: Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong Thailand 21150
P/O : PHM-23-11
Project Name : Environmental Monitoring
Project Location : PP2

Lot ID: 2345671

Date Received : Jun 01, 2023
Date Reported : Jun 08, 2023
Report Number: 2676211-1

Page 1 of 1

Sample Number	2345671-3
Parameter	Noise (Leq 8 hrs.)
Location	Compressor (Vimada Vent Gas use Nitrogen)
Measurement Date	May 31, 2023
Measurement by	Nattawat Sarn

Time	Leq (dB(A))	Unax (dB(A))	L90 (dB(A))
09:02 AM - 10:02 AM	75.3	79.2	74.4
10:02 AM - 11:02 AM	74.9	77.5	74.2
11:02 AM - 12:02 PM	74.8	77.9	74.0
12:02 PM - 01:02 PM	74.7	77.5	74.1
01:02 PM - 02:02 PM	74.8	78.7	74.0
02:02 PM - 03:02 PM	74.6	79.8	73.9
03:02 PM - 04:02 PM	75.7	79.8	74.2
04:02 PM - 05:02 PM	77.5	80.2	76.9

Leq Average 8 hrs. (dB(A)) 75.4
Unax (dB(A)) 80.2
Standard (dB(A)) 90

Reference Method : ISO1996-1 and 1996-2
Standard : มาตรฐานการกำหนดระดับเสียงรบกวนจากโรงงานอุตสาหกรรม
ตามข้อกำหนดการกำหนดระดับเสียงรบกวนจากโรงงานอุตสาหกรรม พ.ศ. 2562

Technical Management

Thanita Kulnirong

Scientist (S)

Approved by

Supt S.

Support Salimath

Section Head

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Analysis / Test Report

Client: Thai Polyethylene Co., Ltd.
10, Map Ta Phut Industrial Estate 1-1 Road, Map Ta Phut, Muang District, Rayong Thailand 21150
P/O : PHM-23-11
Project Name : Environmental Monitoring
Project Location : PP2

Lot ID: 2345668

Date Received : Jun 01, 2023
Date Reported : Jun 06, 2023
Report Number: 2631279-1

Page 1 of 1

Sample Number	2345668-1
Sample Date	May 31, 2023
Sample Description	Noise Dose
Location	Polymerization Unit
Personal Sampling	eq171nd Tzuau
Date Analysis Commenced	Jun 06, 2023

Analyte	Unit	LOQ	Result	Guideline Limit	Method	Guideline Testing Location
Air Testing						
Noise Dose (12 hrs.) (Calculated from Leq)	%	-	2.0	No Standard	MOL Department Labour Protection and Welfare (B.E.2561)	Bangkok
Noise Dose (8 hrs.)	%	-	1.9	No Standard	MOL Department Labour Protection and Welfare (B.E.2561)	Bangkok
TWA (12 hrs.) (Calculated from Leq)	dB(A)	-	66.1	83*	MOL Department Labour Protection and Welfare (B.E.2561)	Bangkok
TWA (8 hrs.)	dB(A)	-	67.8	85	MOL Department Labour Protection and Welfare (B.E.2561)	Bangkok

Guideline :

MOL : 1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Notification of Department of Labour Protection and Welfare on the Standard of Time Weighted Average (TWA) Noise Level (B.E. 2561)
* MOL: Recommended guideline limit for 12 working hours should not be over 85 dB(A)

Sampled By : Nattaporn Jitjiravechewong

Remark :

- LOD : Limit of Detection
- * : Lower than LOQ (Limit of Quantitation) / LOQ (Limit of Reporting)

Approved by

Wichan Choonhant

Assistant Manager

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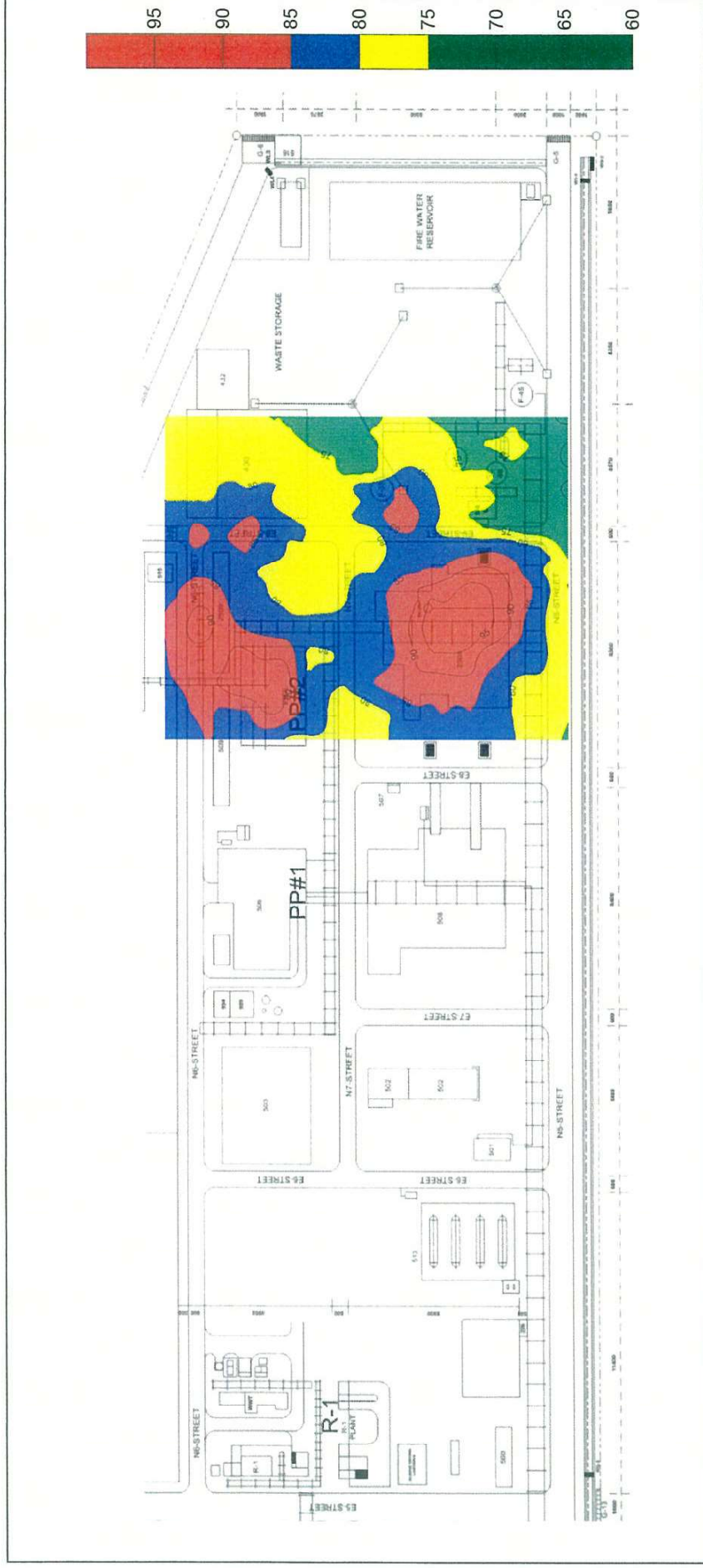
Noise Contour Map

Project : Thai Polyethylene Co., Ltd.

Reference Number : Lot 2345560-1

Measurement Date : Jun 27, 2023

Location : พื้นที่กระบวนการผลิต PP2



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ภาคผนวก ค-6

ระดับความร้อนในสถานประกอบการ



Analysis / Test Report

Client : Thai Polyethylene Co., Ltd.

10, Map Ta Phut Industrial Estate I-1 Road, Map Ta Phut, Muang District,
Rayong Thailand 21150

P/O :

Project Name : Environmental Monitoring

Project Location : PP2

Lot ID: 2313160

Date Received : Feb 09, 2023

Date Reported : Feb 13, 2023

Report Number: 2558995-1

Page 1 of 1

Sample Number 2313160-1
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Feb 08, 2023
Measurement by Natthapon Jiengwareewong
Location ปฏิบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
หน่วยคัดเมล็ด	120	32.0	30.6	35.3	35.2
Average (WBGT)		32.0			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

1. Notification of Department Labour Protection and Welfare on the Criteria and Procedures for Measurement and Analysis of Working Conditions in relation to Heat, Light or Noise Levels, including Duration and Types of Business that must perform (B.E. 2561)
2. Ministerial Regulation on Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment in relation to Heat, Light and Noise, B.E.2559

Technical Management

Supot Salamteh
Section Head

Approved by

Wichan Choonharat
Assistant Manager

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