

ภาคผนวก ง

ใบรับรองผลการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม
ระหว่างเดือนมกราคม ถึงมิถุนายน พ.ศ.2566

ภาคผนวก ง.1

ใบรับรองผลการตรวจวัดคุณภาพอากาศจากแหล่งกำเนิด

**The Monitoring Result of Emission Concentration
100-H1**

PTT Global Chemical Public Co., Ltd.

(Branch 4 : Aromatics 1 Plant)

March 7, 2023

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	5.47	5.42	41.74	41.74	37.48
2	5.45	5.40	42.70	42.70	38.29
3	5.56	5.51	43.34	43.34	39.14
Average	5.49	5.44	42.59	42.59	38.30

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	5.47	5.42	3.97	3.95	3.55
2	5.45	5.40	3.92	3.90	3.50
3	5.56	5.51	3.97	3.96	3.58
Average	5.49	5.44	3.95	3.94	3.54

MTR-100-H1/Run1/28-03-23

**PTT Global Chemical Public Company Limited
EMISSION TEST RESULT**

Date: March 7, 2023	Run # : 1
Start time: 1:20 PM	Location : 100-H1
O₂ instrument Model: AMI 70	Finish time : 1:40 PM
NO_x instrument Model: API 200 AH	Serial No.: 071023-47
SO₂ instrument Model: TELEDYNE 100 EH	Serial No.: 441
Fuel Type : Natural Gas	Serial No.: 186
	Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
1:20 PM	5.73	41.82	3.98
1:21 PM	5.65	42.08	3.76
1:22 PM	5.60	42.03	3.86
1:23 PM	5.57	41.39	3.70
1:24 PM	5.57	41.19	4.76
1:25 PM	5.54	41.31	2.41
1:26 PM	5.46	41.59	2.97
1:27 PM	5.46	41.11	4.36
1:28 PM	5.45	41.83	4.74
1:29 PM	5.41	41.44	4.01
1:30 PM	5.34	41.74	3.87
1:31 PM	5.41	41.57	4.41
1:32 PM	5.38	41.75	4.37
1:33 PM	5.45	41.68	4.41
1:34 PM	5.44	41.48	4.01
1:35 PM	5.40	41.66	4.01
1:36 PM	5.41	41.56	4.30
1:37 PM	5.35	42.03	4.14
1:38 PM	5.35	42.22	4.37
1:39 PM	5.37	42.61	3.09
1:40 PM	5.43	42.47	3.89
Average	5.47	41.74	3.97

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

PTT Global Chemical Public Company Limited
EMISSION TEST RESULT

Run # : 2

Date: March 7, 2023
Start time: 1:41 PM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: TELEDYNE 100 EH
Fuel Type : Natural Gas

Location : 100-H1
Finish time : 2:01 PM
Serial No.: 071023-47
Serial No.: 441
Serial No.: 186
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
1:41 PM	5.44	42.11	3.79
1:42 PM	5.43	42.23	3.90
1:43 PM	5.42	42.44	3.94
1:44 PM	5.43	42.53	3.98
1:45 PM	5.41	42.53	4.02
1:46 PM	5.38	42.12	4.14
1:47 PM	5.37	42.41	3.85
1:48 PM	5.38	42.67	3.87
1:49 PM	5.39	42.49	3.98
1:50 PM	5.43	42.70	3.90
1:51 PM	5.45	42.84	3.94
1:52 PM	5.47	43.30	3.85
1:53 PM	5.44	43.35	3.93
1:54 PM	5.46	43.40	3.86
1:55 PM	5.46	42.97	3.94
1:56 PM	5.52	42.74	3.82
1:57 PM	5.52	42.89	3.98
1:58 PM	5.48	42.87	3.87
1:59 PM	5.51	42.82	4.07
2:00 PM	5.55	42.59	3.79
2:01 PM	5.54	42.71	3.94
Average	5.45	42.70	3.92

Signature Ladawan W.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist

PTT Global Chemical Public Company Limited
EMISSION TEST RESULT

Run # : 3

Date: March 7, 2023
Start time: 2:02 PM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: TELEDYNE 100 EH
Fuel Type : Natural Gas

Location : 100-H1
Finish time : 2:22 PM
Serial No.: 071023-47
Serial No.: 441
Serial No.: 186
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
2:02 PM	5.50	43.30	4.01
2:03 PM	5.49	43.50	4.02
2:04 PM	5.51	43.49	3.98
2:05 PM	5.52	43.30	3.98
2:06 PM	5.47	43.11	4.32
2:07 PM	5.48	43.09	4.01
2:08 PM	5.51	43.02	4.03
2:09 PM	5.59	43.50	4.56
2:10 PM	5.53	43.65	3.76
2:11 PM	5.52	43.65	3.87
2:12 PM	5.50	43.31	3.87
2:13 PM	5.55	42.96	3.98
2:14 PM	5.59	43.27	3.90
2:15 PM	5.65	42.99	3.87
2:16 PM	5.64	43.38	3.89
2:17 PM	5.64	43.19	3.78
2:18 PM	5.64	43.60	3.95
2:19 PM	5.61	43.84	4.07
2:20 PM	5.62	43.27	3.87
2:21 PM	5.60	43.74	3.73
2:22 PM	5.63	42.88	3.92
Average	5.56	43.34	3.97

Signature Ladawan W.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist



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SECOT CO.,LTD.

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/100-H1
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 07/03/2023
RECEIVED DATE	: 13/03/2023	ANALYTICAL DATE	: 14-24/03/2023
REPORT DATE	: 27/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 100-H1	OPERATOR	: Mr. Song Hengchwankul
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 52.61	m	Gas Velocity	: 4.8	m/s
Diameter	: 1.44	m	Flow rate ^{1/}	: 268	Ncu.m/min
Temperature	: 185.2	°C	Excess Oxygen	: 5.4	%
Moisture	: 11.7	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		5.4%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Sulfur Dioxide	ppm	3.94	3.54	0.05	60*/12.69**	0.17**	US EPA Method 6C
Oxide of Nitrogen	ppm	42.59	38.30	0.36	200*/59.19**	0.57**	US EPA Method 7E

Ladawan N.

(Miss Ladawan Wongcharoen)

Environmental Scientist

Preeda S.

(Miss Preeda Somjai)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

2. This report shall not be reproduced, except in full, without official approval.

3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. * Notification of Ministry of Industry, B.E.2549 (2006) and Notification of Ministry of Natural Resource and Environment, B.E.2549 (2006) (at 7 % O₂).

5. ** The assigned value in EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/100-H1
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 07/03/2023
RECEIVED DATE	: 08/03/2023	ANALYTICAL DATE	: 10/03/2023
REPORT DATE	: 13/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 100-H1	OPERATOR	: Mr. Pisanu Seenampeng
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 52.61	m	Gas Velocity	: 4.8	m/s
Diameter	: 1.44	m	Flow rate ^{1/}	: 268	Ncu.m/min
Temperature	: 185.2	°C	Excess Oxygen	: 5.4	%
Moisture	: 11.7	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		5.4%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Total Volatile Organic Compounds	ppm	2.88	2.59	0.023	-	-	US EPA Method 25A

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

The Monitoring Result of Emission Concentration
100-H1A
PTT Global Chemical Public Co., Ltd.
(Branch 4 : Aromatics 1 Plant)
March 7, 2023

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	5.43	5.37	8.75	8.70	7.79
2	5.16	5.11	8.56	8.51	7.49
3	5.28	5.23	8.53	8.48	7.52
Average	5.29	5.24	8.61	8.56	7.60

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	5.43	5.37	5.38	5.36	4.80
2	5.16	5.11	5.41	5.38	4.74
3	5.28	5.23	5.28	5.23	4.64
Average	5.29	5.24	5.36	5.32	4.72

MTR 100-H1A/Run1/28-03-23

PTT Global Chemical Public Company Limited
EMISSION TEST RESULT

Date: March 7, 2023
Start time: 1:20 PM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: API 100 AH
Fuel Type : Natural Gas

Run # : 1
Location : 100-H1A
Finish time : 1:40 PM
Serial No.: 111117-2
Serial No.: 314
Serial No.: 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
1:20 PM	5.52	8.88	5.44
1:21 PM	5.50	8.88	5.41
1:22 PM	5.46	8.76	5.39
1:23 PM	5.50	8.75	5.40
1:24 PM	5.41	8.77	5.41
1:25 PM	5.47	8.78	5.43
1:26 PM	5.46	8.67	5.40
1:27 PM	5.49	8.68	5.37
1:28 PM	5.58	8.79	5.36
1:29 PM	5.52	8.68	5.35
1:30 PM	5.40	8.75	5.42
1:31 PM	5.47	8.77	5.43
1:32 PM	5.42	8.70	5.38
1:33 PM	5.53	8.79	5.38
1:34 PM	5.49	8.73	5.38
1:35 PM	5.34	8.68	5.33
1:36 PM	5.43	8.78	5.37
1:37 PM	5.45	8.67	5.30
1:38 PM	5.30	8.70	5.30
1:39 PM	5.13	8.75	5.33
1:40 PM	5.17	8.70	5.42
Average	5.43	8.75	5.38

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

PTT Global Chemical Public Company Limited EMISSION TEST RESULT

Run # : 2
Date: March 7, 2023
Start time: 1:41 PM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: API 100 AH
Fuel Type : Natural Gas
Location : 100-H1A
Finish time : 2:01 PM
Serial No.: 111117-2
Serial No.: 314
Serial No.: 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
1:41 PM	5.21	8.59	5.40
1:42 PM	5.34	8.67	5.47
1:43 PM	5.16	8.61	5.42
1:44 PM	5.17	8.56	5.42
1:45 PM	5.11	8.55	5.39
1:46 PM	5.08	8.65	5.44
1:47 PM	4.99	8.59	5.46
1:48 PM	4.94	8.65	5.45
1:49 PM	4.85	8.60	5.48
1:50 PM	5.00	8.60	5.48
1:51 PM	5.14	8.51	5.48
1:52 PM	5.14	8.43	5.48
1:53 PM	5.24	8.52	5.49
1:54 PM	5.25	8.56	5.40
1:55 PM	5.17	8.46	5.32
1:56 PM	5.17	8.50	5.37
1:57 PM	5.29	8.60	5.37
1:58 PM	5.26	8.67	5.32
1:59 PM	5.33	8.58	5.37
2:00 PM	5.35	8.47	5.34
2:01 PM	5.21	8.41	5.34
Average	5.16	8.56	5.41

Signature Ladawan W.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist

PTT Global Chemical Public Company Limited EMISSION TEST RESULT

Run # : 3
Date: March 7, 2023
Start time: 2:02 PM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: API 100 AH
Fuel Type : Natural Gas
Location : 100-H1A
Finish time : 2:22 PM
Serial No.: 111117-2
Serial No.: 314
Serial No.: 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
2:02 PM	5.15	8.67	5.51
2:03 PM	5.13	8.56	5.41
2:04 PM	5.31	8.54	5.38
2:05 PM	5.29	8.43	5.29
2:06 PM	5.32	8.52	5.26
2:07 PM	5.12	8.44	5.26
2:08 PM	5.07	8.52	5.27
2:09 PM	5.28	8.43	5.24
2:10 PM	5.29	8.54	5.19
2:11 PM	5.37	8.56	5.24
2:12 PM	5.39	8.44	5.20
2:13 PM	5.34	8.48	5.19
2:14 PM	5.37	8.56	5.24
2:15 PM	5.34	8.61	5.26
2:16 PM	5.34	8.50	5.29
2:17 PM	5.33	8.51	5.28
2:18 PM	5.37	8.48	5.27
2:19 PM	5.24	8.54	5.26
2:20 PM	5.27	8.56	5.25
2:21 PM	5.27	8.59	5.29
2:22 PM	5.33	8.62	5.31
Average	5.28	8.53	5.28

Signature Ladawan W.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/100-H1A
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 07/03/2023
RECEIVED DATE	: 13/03/2023	ANALYTICAL DATE	: 14-24/03/2023
REPORT DATE	: 27/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 100-H1A	OPERATOR	: Mr. Song Hengchwankul
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 52.61	m	Gas Velocity	: 5.3	m/s
Diameter	: 1.44	m	Flow rate ^{1/}	: 278	Ncu.m/min
Temperature	: 216.7	°C	Excess Oxygen	: 5.2	%
Moisture	: 11.2	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		5.2%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Sulfur Dioxide	ppm	5.32	4.72	0.06	60*/14.89**	0.11**	US EPA Method 6C
Oxide of Nitrogen	ppm	8.56	7.60	0.07	200*/99.84**	0.53**	US EPA Method 7E

Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

Preda S.

(Miss Preda Somjai)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. * Notification of Ministry of Industry, B.E.2549 (2006) and Notification of Ministry of Natural Resource and Environment, B.E.2549 (2006) (at 7 % O₂).

5. ** The assigned value in EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/100-H1A
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 07/03/2023
RECEIVED DATE	: 08/03/2023	ANALYTICAL DATE	: 10/03/2023
REPORT DATE	: 13/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 100-H1A	OPERATOR	: Mr. Song Hengchwankul
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 52.61	m	Gas Velocity	: 5.3	m/s
Diameter	: 1.44	m	Flow rate ^{1/}	: 278	Ncu.m/min
Temperature	: 216.7	°C	Excess Oxygen	: 5.2	%
Moisture	: 11.2	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		5.2%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Total Volatile Organic Compounds	ppm	1.79	1.59	0.015	-	-	US EPA Method 25A

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

The Monitoring Result of Emission Concentration
150-H1/H2
PTT Global Chemical Public Co., Ltd.
(Branch 4 : Aromatics 1 Plant)
March 7, 2023

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	4.07	4.07	29.31	29.30	24.20
2	4.01	3.99	29.32	29.31	24.09
3	4.05	4.01	29.81	29.80	24.52
Average	4.04	4.02	29.48	29.47	24.27

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	4.07	4.07	5.74	5.72	4.72
2	4.01	3.99	5.87	5.85	4.81
3	4.05	4.01	6.00	5.98	4.92
Average	4.04	4.02	5.87	5.85	4.82

PTT Global Chemical Public Company Limited
EMISSION TEST RESULT

Date: March 7, 2023
Start time: 10:40 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: API 100 AH
Fuel Type : Natural Gas

Run # : 1
Location : 150-H1/H2
Finish time : 11:00 AM
Serial No.: 111117-2
Serial No.: 314
Serial No.: 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
10:40 AM	4.25	29.81	6.26
10:41 AM	4.14	29.88	6.20
10:42 AM	4.17	29.51	6.02
10:43 AM	4.19	29.42	5.99
10:44 AM	4.20	29.60	6.26
10:45 AM	4.10	29.59	5.46
10:46 AM	4.14	29.51	5.42
10:47 AM	4.05	29.63	5.50
10:48 AM	4.05	29.41	5.50
10:49 AM	4.07	29.27	5.60
10:50 AM	4.05	29.39	5.62
10:51 AM	4.00	29.10	5.61
10:52 AM	4.03	28.87	5.58
10:53 AM	3.98	28.97	5.57
10:54 AM	4.04	29.21	5.65
10:55 AM	4.02	29.25	5.64
10:56 AM	4.00	29.08	5.72
10:57 AM	3.98	29.04	5.69
10:58 AM	3.96	29.00	5.79
10:59 AM	4.02	28.99	5.74
11:00 AM	4.01	29.01	5.75
Average	4.07	29.31	5.74

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

PTT Global Chemical Public Company Limited
EMISSION TEST RESULT

Date: March 7, 2023
Start time: 11:01 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: API 100 AH
Fuel Type : Natural Gas

Run # : 2
Location : 150-H1/H2
Finish time : 11:21 AM
Serial No.: 111117-2
Serial No.: 314
Serial No.: 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:01 AM	4.01	28.91	5.78
11:02 AM	3.99	28.91	5.83
11:03 AM	4.00	28.84	5.89
11:04 AM	3.98	28.82	5.86
11:05 AM	3.95	28.95	5.81
11:06 AM	3.97	29.18	5.82
11:07 AM	3.95	29.15	5.86
11:08 AM	3.92	28.61	5.86
11:09 AM	3.98	29.18	5.93
11:10 AM	3.96	29.22	5.90
11:11 AM	3.95	29.18	5.88
11:12 AM	3.93	29.26	5.92
11:13 AM	4.03	29.44	5.90
11:14 AM	4.10	29.49	5.87
11:15 AM	4.11	29.74	5.91
11:16 AM	4.11	30.09	5.93
11:17 AM	4.09	30.08	5.91
11:18 AM	4.09	30.00	5.85
11:19 AM	4.07	29.56	5.84
11:20 AM	4.06	29.56	5.82
11:21 AM	4.01	29.60	5.85
Average	4.01	29.32	5.87

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

PTT Global Chemical Public Company Limited
EMISSION TEST RESULT

Date: March 7, 2023
Start time: 11:22 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: API 100 AH
Fuel Type : Natural Gas

Run # : 3
Location : 150-H1/H2
Finish time : 11:42 AM
Serial No.: 111117-2
Serial No.: 314
Serial No.: 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:22 AM	4.05	29.59	5.98
11:23 AM	4.06	29.49	6.01
11:24 AM	4.07	29.83	6.01
11:25 AM	4.10	29.89	6.01
11:26 AM	4.06	30.01	5.96
11:27 AM	4.01	30.00	5.96
11:28 AM	4.10	30.05	5.92
11:29 AM	4.07	30.13	5.94
11:30 AM	4.06	29.96	5.96
11:31 AM	4.09	29.92	5.96
11:32 AM	4.07	30.08	6.01
11:33 AM	4.07	29.69	5.98
11:34 AM	4.06	29.78	6.04
11:35 AM	4.07	30.06	6.09
11:36 AM	4.09	30.18	6.07
11:37 AM	4.08	29.92	6.05
11:38 AM	4.04	29.75	6.05
11:39 AM	4.00	29.62	5.96
11:40 AM	3.98	29.42	5.99
11:41 AM	3.96	29.35	6.00
11:42 AM	4.00	29.27	6.10
Average	4.05	29.81	6.00

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/150-H1/H2
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 07/03/2023
RECEIVED DATE	: 13/03/2023	ANALYTICAL DATE	: 14-24/03/2023
REPORT DATE	: 27/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 150-H1/H2	OPERATOR	: Mr. Song Hengchwankul
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 35.70	m	Gas Velocity	: 6.1	m/s
Diameter	: 1.44	m	Flow rate ^{1/}	: 337	Ncu.m/min
Temperature	: 194.5	°C	Excess Oxygen	: 4.0	%
Moisture	: 11.1	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE METHOD
		4.0%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Sulfur Dioxide	ppm	5.85	4.82	0.09	60*/10.37**	0.19**	US EPA Method 6C
Oxide of Nitrogen	ppm	29.47	24.27	0.31	200*/60.74**	0.80**	US EPA Method 7E

Ladawan W.
(Miss Ladawan Wongcharoen)

Environmental Scientist

Preeda S.
(Miss Preeda Somjai)

Technical Management Team

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.
 4. * Notification of Ministry of Industry, B.E.2549 (2006) and Notification of Ministry of Natural Resource and Environment, B.E.2549 (2006) (at 7 % O₂).
 5. ** The assigned value in EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/150-H1/H2
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 07/03/2023
RECEIVED DATE	: 08/03/2023	ANALYTICAL DATE	: 10/03/2023
REPORT DATE	: 13/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 150-H1/H2	OPERATOR	: Mr. Pisanu Seenampeng
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 35.70	m	Gas Velocity	: 6.1	m/s
Diameter	: 1.44	m	Flow rate ^{1/}	: 337	Ncu.m/min
Temperature	: 194.5	°C	Excess Oxygen	: 4.0	%
Moisture	: 11.1	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE METHOD
		4.0%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Total Volatile Organic Compounds	ppm	2.70	2.22	0.027	-	-	US EPA Method 25A

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

- Remark :**
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 2. This report shall not be reproduced, except in full, without official approval.
 3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

**The Monitoring Result of Emission Concentration
200-H1/H2/H3/H4/H5**

PTT Global Chemical Public Co., Ltd.

(Branch 4 : Aromatics 1 Plant)

March 2, 2023

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	5.97	5.91	32.53	32.52	30.16
2	5.94	5.89	32.62	32.61	30.20
3	5.93	5.90	32.83	32.83	30.42
Average	5.95	5.90	32.66	32.65	30.26

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	5.97	5.91	3.98	3.95	3.66
2	5.94	5.89	4.18	4.14	3.83
3	5.93	5.90	4.26	4.22	3.91
Average	5.95	5.90	4.14	4.10	3.80

MTR 200-H1-2-3-4/Run1/28-03-23

**PTT Global Chemical Public Company Limited
EMISSION TEST RESULT**

Date: <u>March 2, 2023</u>	Run # : <u>1</u>
Start time: <u>10:20 AM</u>	Location : <u>200-H1/H2/H3/H4/H5</u>
O₂ instrument Model: <u>AMI 70</u>	Finish time : <u>10:40 AM</u>
NO_x instrument Model: <u>API 200 AH</u>	Serial No.: <u>111117-2</u>
SO₂ instrument Model: <u>API 100 AH</u>	Serial No.: <u>314</u>
Fuel Type : <u>Natural Gas</u>	Serial No.: <u>060</u>
	Test Operator : <u>Song H.</u>

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
10:20 AM	6.05	31.63	3.97
10:21 AM	5.92	31.89	3.82
10:22 AM	5.90	32.26	3.98
10:23 AM	5.88	32.27	3.97
10:24 AM	5.92	32.28	4.11
10:25 AM	5.89	32.54	3.97
10:26 AM	5.99	32.48	3.99
10:27 AM	5.97	32.62	3.91
10:28 AM	5.99	32.84	3.95
10:29 AM	5.91	32.61	3.98
10:30 AM	5.88	32.60	3.98
10:31 AM	5.90	32.52	3.96
10:32 AM	5.95	32.48	3.96
10:33 AM	5.93	32.64	4.00
10:34 AM	6.05	32.63	4.07
10:35 AM	6.01	32.58	4.06
10:36 AM	5.99	32.82	3.97
10:37 AM	6.01	32.87	4.00
10:38 AM	5.98	32.91	3.96
10:39 AM	6.05	32.82	3.97
10:40 AM	6.10	32.74	4.00
Average	5.97	32.53	3.98

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

PTT Global Chemical Public Company Limited EMISSION TEST RESULT

Run # : 2

Date: March 2, 2023
 Start time: 10:41 AM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: API 200 AH
 SO₂ instrument Model: API 100 AH
 Fuel Type : Natural Gas

Location : 200-H1/H2/H3/H4/H5
 Finish time : 11:01 AM
 Serial No.: 111117-2
 Serial No.: 314
 Serial No.: 060
 Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
10:41 AM	6.03	32.71	4.07
10:42 AM	6.06	32.86	4.08
10:43 AM	6.01	32.86	4.11
10:44 AM	6.05	32.73	4.12
10:45 AM	5.94	32.49	4.08
10:46 AM	5.94	32.37	4.13
10:47 AM	5.99	32.13	4.14
10:48 AM	5.96	32.20	4.12
10:49 AM	5.98	32.54	4.17
10:50 AM	6.00	32.69	4.21
10:51 AM	5.98	32.70	4.27
10:52 AM	6.00	32.81	4.21
10:53 AM	5.92	33.02	4.21
10:54 AM	5.81	32.98	4.21
10:55 AM	5.85	32.74	4.25
10:56 AM	5.88	32.68	4.25
10:57 AM	5.83	32.52	4.21
10:58 AM	5.82	32.52	4.22
10:59 AM	5.89	32.49	4.24
11:00 AM	5.90	32.54	4.22
11:01 AM	5.87	32.52	4.24
Average	5.94	32.62	4.18

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

PTT Global Chemical Public Company Limited EMISSION TEST RESULT

Run # : 3

Date: March 2, 2023
 Start time: 11:02 AM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: API 200 AH
 SO₂ instrument Model: API 100 AH
 Fuel Type : Natural Gas

Location : 200-H1/H2/H3/H4/H5
 Finish time : 11:22 AM
 Serial No.: 111117-2
 Serial No.: 314
 Serial No.: 060
 Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:02 AM	5.88	32.46	4.26
11:03 AM	5.92	32.56	4.30
11:04 AM	5.90	32.64	4.22
11:05 AM	5.86	32.78	4.23
11:06 AM	5.89	32.85	4.20
11:07 AM	5.93	32.68	4.20
11:08 AM	5.89	32.71	4.20
11:09 AM	6.01	32.82	4.22
11:10 AM	5.96	32.83	4.21
11:11 AM	6.00	32.90	4.25
11:12 AM	6.00	32.93	4.29
11:13 AM	5.96	32.87	4.22
11:14 AM	5.98	33.13	4.27
11:15 AM	5.97	33.15	4.28
11:16 AM	5.99	32.91	4.25
11:17 AM	5.95	32.90	4.28
11:18 AM	5.92	33.08	4.28
11:19 AM	5.87	33.19	4.32
11:20 AM	5.87	32.81	4.34
11:21 AM	5.88	32.65	4.33
11:22 AM	5.93	32.51	4.37
Average	5.93	32.83	4.26

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/200-H1/H2/H3/H4/H5
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 02/03/2023
RECEIVED DATE	: 13/03/2023	ANALYTICAL DATE	: 14-24/03/2023
REPORT DATE	: 27/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 200-H1/H2/H3/H4/H5	OPERATOR	: Mr. Song Hengchwankul
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 84.00	m	Gas Velocity	: 5.8	m/s
Diameter	: 3.42	m	Flow rate ^{1/}	: 1,722	Ncu.m/min
Temperature	: 211.2	°C	Excess Oxygen	: 5.9	%
Moisture	: 12.4	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE METHOD
		5.9%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Sulfur Dioxide	ppm	4.10	3.80	0.31	60*/26.62**	0.96**	US EPA Method 6C
Oxide of Nitrogen	ppm	32.65	30.26	1.76	200*/145.46**	3.77**	US EPA Method 7E

Ladawan H.

(Miss Ladawan Wongcharoen)

Environmental Scientist

Preeda S.

(Miss Preeda Somjai)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. * Notification of Ministry of Industry, B.E.2549 (2006) and Notification of Ministry of Natural Resource and Environment, B.E.2549 (2006) (at 7 % O₂).

5. ** The assigned value in EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/200-H1/H2/H3/H4/H5
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 02/03/2023
RECEIVED DATE	: 03/03/2023	ANALYTICAL DATE	: 03/03/2023
REPORT DATE	: 13/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 200-H1/H2/H3/H4/H5	OPERATOR	: Mr. Pisanu Seenampeng
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 84.00	m	Gas Velocity	: 5.8	m/s
Diameter	: 3.42	m	Flow rate ^{1/}	: 1,722	Ncu.m/min
Temperature	: 211.2	°C	Excess Oxygen	: 5.9	%
Moisture	: 12.4	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE METHOD
		5.9%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Total Volatile Organic Compounds	ppm	2.24	2.08	0.116	-	-	US EPA Method 25A

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

**The Monitoring Result of Emission Concentration
430-H1**

PTT Global Chemical Public Co., Ltd.

(Branch 4 : Aromatics 1 Plant)

March 8, 2023

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	4.06	4.02	58.17	58.19	47.92
2	4.10	4.05	57.99	58.01	47.85
3	4.16	4.11	57.31	57.32	47.45
Average	4.11	4.06	57.82	57.84	47.74

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	4.06	4.02	7.08	7.05	5.81
2	4.10	4.05	6.91	6.88	5.68
3	4.16	4.11	6.85	6.81	5.64
Average	4.11	4.06	6.95	6.91	5.71

MTR 430-H1/Run1/28-03-23

**PTT Global Chemical Public Company Limited
EMISSION TEST RESULT**

Date:	March 8, 2023	Run # :	1
Start time:	1:10 PM	Location :	430-H1
O₂ instrument Model:	AMI 70	Finish time :	1:30 PM
NO_x instrument Model:	API 200 AH	Serial No.:	111117-2
SO₂ instrument Model:	API 100 AH	Serial No.:	314
Fuel Type :	Natural Gas	Serial No.:	060
		Test Operator :	Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
1:10 PM	4.13	57.86	7.07
1:11 PM	4.09	57.73	7.05
1:12 PM	4.11	57.79	7.08
1:13 PM	4.07	57.71	7.11
1:14 PM	3.93	58.00	7.14
1:15 PM	3.87	58.23	7.13
1:16 PM	4.05	58.05	7.15
1:17 PM	4.09	58.21	7.11
1:18 PM	4.00	58.44	7.06
1:19 PM	3.92	58.48	7.05
1:20 PM	4.10	58.56	7.10
1:21 PM	4.11	58.75	7.09
1:22 PM	4.00	58.73	7.08
1:23 PM	3.96	58.58	7.08
1:24 PM	4.12	58.21	7.03
1:25 PM	4.11	58.27	6.98
1:26 PM	4.04	58.35	7.04
1:27 PM	4.06	58.34	7.13
1:28 PM	4.23	57.95	7.15
1:29 PM	4.17	57.71	7.10
1:30 PM	4.10	57.59	7.01
Average	4.06	58.17	7.08

Signature Ladawan H.

(Miss Ladawan Wongcharoen)

Environmental Scientist

PTT Global Chemical Public Company Limited EMISSION TEST RESULT

Run # : 2
Date: March 8, 2023
Start time: 1:31 PM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: API 100 AH
Fuel Type : Natural Gas

Location : 430-H1
Finish time : 1:51 PM
Serial No.: 111117-2
Serial No.: 314
Serial No.: 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
1:31 PM	4.11	57.61	7.04
1:32 PM	4.18	58.33	6.99
1:33 PM	4.03	58.17	7.02
1:34 PM	3.97	58.06	7.10
1:35 PM	4.10	57.94	7.13
1:36 PM	4.17	57.93	7.00
1:37 PM	3.98	57.71	6.98
1:38 PM	3.98	57.53	6.96
1:39 PM	4.16	57.58	6.93
1:40 PM	4.24	57.39	6.83
1:41 PM	4.05	58.28	6.76
1:42 PM	4.01	58.77	6.83
1:43 PM	4.16	58.35	6.89
1:44 PM	4.15	58.16	6.84
1:45 PM	4.10	58.33	6.77
1:46 PM	4.11	58.20	6.76
1:47 PM	4.21	57.74	6.80
1:48 PM	4.10	58.01	6.86
1:49 PM	4.00	58.19	6.85
1:50 PM	4.03	57.77	6.90
1:51 PM	4.21	57.65	6.84
Average	4.10	57.99	6.91

Signature Ladawan W.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist

PTT Global Chemical Public Company Limited EMISSION TEST RESULT

Run # : 3
Date: March 8, 2023
Start time: 1:52 PM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: API 100 AH
Fuel Type : Natural Gas

Location : 430-H1
Finish time : 2:12 PM
Serial No.: 111117-2
Serial No.: 314
Serial No.: 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
1:52 PM	4.23	57.78	6.82
1:53 PM	4.08	57.96	6.85
1:54 PM	4.08	57.26	6.87
1:55 PM	4.19	56.30	6.87
1:56 PM	4.10	57.39	6.89
1:57 PM	4.09	57.61	6.97
1:58 PM	4.12	57.14	6.95
1:59 PM	4.27	57.25	6.89
2:00 PM	4.16	57.60	6.85
2:01 PM	4.02	57.65	6.88
2:02 PM	4.18	57.41	6.90
2:03 PM	4.23	57.09	6.88
2:04 PM	4.13	57.35	6.82
2:05 PM	4.06	57.47	6.85
2:06 PM	4.19	57.25	6.85
2:07 PM	4.12	57.19	6.79
2:08 PM	4.04	56.62	6.77
2:09 PM	4.27	56.55	6.84
2:10 PM	4.42	57.02	6.79
2:11 PM	4.23	58.02	6.72
2:12 PM	4.19	57.65	6.81
Average	4.16	57.31	6.85

Signature Ladawan W.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/430-H1
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 08/03/2023
RECEIVED DATE	: 13/03/2023	ANALYTICAL DATE	: 14-24/03/2023
REPORT DATE	: 27/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 430-H1	OPERATOR	: Mr. Song Hengchwankul
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas
STACK DESCRIPTION			

Height	: 45.00	m	Gas Velocity	: 6.5	m/s
Diameter	: 1.44	m	Flow rate ^{1/}	: 316	Ncu.m/min
Temperature	: 256.8	°C	Excess Oxygen	: 4.1	%
Moisture	: 11.7	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		4.1%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Sulfur Dioxide	ppm	6.91	5.71	0.10	60*/14.93**	0.25**	US EPA Method 6C
Oxide of Nitrogen	ppm	57.84	47.74	0.57	200*/93.89**	1.13**	US EPA Method 7E

Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

Preeda S.

(Miss Preeda Somjai)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

2. This report shall not be reproduced, except in full, without official approval.

3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. * Notification of Ministry of Industry, B.E.2549 (2006) and Notification of Ministry of Natural Resource and Environment, B.E.2549 (2006) (at 7 % O₂).

5. ** The assigned value in EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/430-H1
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 08/03/2023
RECEIVED DATE	: 10/03/2023	ANALYTICAL DATE	: 13/03/2023
REPORT DATE	: 17/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 430-H1	OPERATOR	: Mr. Pisanu Seenampeng
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas
STACK DESCRIPTION			

Height	: 45.00	m	Gas Velocity	: 6.5	m/s
Diameter	: 1.44	m	Flow rate ^{1/}	: 316	Ncu.m/min
Temperature	: 256.8	°C	Excess Oxygen	: 4.1	%
Moisture	: 11.7	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		4.1%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Total Volatile Organic Compounds	ppm	1.64	1.35	0.016	-	-	US EPA Method 25A

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

The Monitoring Result of Emission Concentration
380-H1/H2
PTT Global Chemical Public Co., Ltd.
(Branch 4 : Aromatics 1 Plant)
March 8, 2023

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	3.46	3.41	36.12	36.12	28.71
2	3.39	3.34	35.88	35.88	28.40
3	3.43	3.39	35.70	35.70	28.34
Average	3.43	3.38	35.90	35.90	28.48

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	3.46	3.41	6.66	6.64	5.28
2	3.39	3.34	6.46	6.44	5.10
3	3.43	3.39	6.30	6.27	4.98
Average	3.43	3.38	6.47	6.45	5.12

PTT Global Chemical Public Company Limited
EMISSION TEST RESULT

Date: March 8, 2023
Start time: 10:30 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: API 100 AH
Fuel Type : Natural Gas

Run # : 1
Location : 380-H1/H2
Finish time : 10:50 AM
Serial No.: 111117-2
Serial No.: 314
Serial No.: 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
10:30 AM	3.37	36.40	6.84
10:31 AM	3.36	36.10	6.83
10:32 AM	3.36	35.83	6.85
10:33 AM	3.60	35.58	6.87
10:34 AM	3.48	35.90	6.72
10:35 AM	3.47	36.16	6.73
10:36 AM	3.51	36.12	6.75
10:37 AM	3.52	36.15	6.74
10:38 AM	3.52	36.41	6.72
10:39 AM	3.45	35.99	6.62
10:40 AM	3.43	35.89	6.69
10:41 AM	3.52	36.42	6.66
10:42 AM	3.50	36.41	6.58
10:43 AM	3.52	36.20	6.53
10:44 AM	3.51	36.05	6.50
10:45 AM	3.47	36.32	6.48
10:46 AM	3.47	36.27	6.49
10:47 AM	3.42	36.06	6.58
10:48 AM	3.41	36.01	6.60
10:49 AM	3.37	36.16	6.58
10:50 AM	3.40	36.01	6.58
Average	3.46	36.12	6.66

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

PTT Global Chemical Public Company Limited EMISSION TEST RESULT

Run # : 2
Date: March 8, 2023
Start time: 10:51 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: API 100 AH
Fuel Type : Natural Gas

Location: 380-H1/H2
Finish time : 11:11 AM
Serial No.: 111117-2
Serial No.: 314
Serial No.: 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
10:51 AM	3.39	35.78	6.51
10:52 AM	3.39	35.99	6.49
10:53 AM	3.33	36.11	6.53
10:54 AM	3.33	36.02	6.59
10:55 AM	3.37	35.74	6.53
10:56 AM	3.41	35.95	6.53
10:57 AM	3.38	35.82	6.52
10:58 AM	3.38	35.70	6.47
10:59 AM	3.42	35.66	6.50
11:00 AM	3.37	35.90	6.45
11:01 AM	3.37	35.96	6.45
11:02 AM	3.37	36.04	6.45
11:03 AM	3.38	35.73	6.36
11:04 AM	3.41	35.83	6.40
11:05 AM	3.44	35.96	6.42
11:06 AM	3.41	36.15	6.48
11:07 AM	3.43	36.02	6.51
11:08 AM	3.38	35.96	6.40
11:09 AM	3.44	35.91	6.33
11:10 AM	3.42	35.89	6.34
11:11 AM	3.42	35.39	6.32
Average	3.39	35.88	6.46

Signature Ladawan H.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist

PTT Global Chemical Public Company Limited EMISSION TEST RESULT

Run # : 3
Date: March 8, 2023
Start time: 11:12 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: API 100 AH
Fuel Type : Natural Gas

Location: 380-H1/H2
Finish time : 11:32 AM
Serial No.: 111117-2
Serial No.: 314
Serial No.: 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:12 AM	3.41	35.54	6.34
11:13 AM	3.40	35.96	6.40
11:14 AM	3.41	35.92	6.35
11:15 AM	3.41	36.10	6.31
11:16 AM	3.46	35.75	6.27
11:17 AM	3.42	35.61	6.33
11:18 AM	3.35	35.70	6.36
11:19 AM	3.34	35.68	6.33
11:20 AM	3.34	35.86	6.36
11:21 AM	3.33	35.67	6.39
11:22 AM	3.39	35.43	6.37
11:23 AM	3.46	35.45	6.33
11:24 AM	3.48	35.73	6.31
11:25 AM	3.46	35.83	6.29
11:26 AM	3.47	36.01	6.27
11:27 AM	3.46	35.86	6.28
11:28 AM	3.46	35.70	6.24
11:29 AM	3.45	35.75	6.25
11:30 AM	3.47	35.35	6.23
11:31 AM	3.50	35.28	6.17
11:32 AM	3.55	35.48	6.18
Average	3.43	35.70	6.30

Signature Ladawan H.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/380-H1/H2
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 08/03/2023
RECEIVED DATE	: 13/03/2023	ANALYTICAL DATE	: 14-24/03/2023
REPORT DATE	: 27/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 380-H1/H2	OPERATOR	: Mr. Song Hengchwankul
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 37.50	m	Gas Velocity	: 5.5	m/s
Diameter	: 1.88	m	Flow rate ^{1/}	: 428	Ncu.m/min
Temperature	: 292.3	°C	Excess Oxygen	: 3.4	%
Moisture	: 10.3	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		3.4%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Sulfur Dioxide	ppm	6.45	5.12	0.12	60*/11.61**	0.27**	US EPA Method 6C
Oxide of Nitrogen	ppm	35.90	28.48	0.48	200*/59.25**	0.99**	US EPA Method 7E

Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. * Notification of Ministry of Industry, B.E.2549 (2006) and Notification of Ministry of Natural Resource and Environment, B.E.2549 (2006) (at 7 % O₂).

5. ** The assigned value in EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/380-H1/H2
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 08/03/2023
RECEIVED DATE	: 10/03/2023	ANALYTICAL DATE	: 13/03/2023
REPORT DATE	: 17/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 380-H1/H2	OPERATOR	: Mr. Pisanu Seenampeng
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 37.50	m	Gas Velocity	: 5.5	m/s
Diameter	: 1.88	m	Flow rate ^{1/}	: 428	Ncu.m/min
Temperature	: 292.3	°C	Excess Oxygen	: 3.4	%
Moisture	: 10.3	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		3.4%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Total Volatile Organic Compounds	ppm	1.65	1.31	0.021	-	-	US EPA Method 25A

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)
Analyst

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

**The Monitoring Result of Emission Concentration
432-H1**

PTT Global Chemical Public Co., Ltd.

(Branch 4 : Aromatics 1 Plant)

March 4, 2023

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	4.71	4.72	57.69	57.70	49.57
2	4.79	4.79	57.41	57.42	49.54
3	4.70	4.69	57.17	57.19	49.04
Average	4.73	4.73	57.42	57.44	49.38

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	4.71	4.72	5.21	5.19	4.46
2	4.79	4.79	5.15	5.13	4.43
3	4.70	4.69	5.26	5.24	4.49
Average	4.73	4.73	5.21	5.19	4.46

**PTT Global Chemical Public Company Limited
EMISSION TEST RESULT**

Run # : 1
Date : March 4, 2023
Location : 432-H1
Start time : 9:50 AM
Finish time : 10:10 AM
O₂ instrument Model : AMI 70
Serial No. : 111117-2
NO_x instrument Model : API 200 AH
Serial No. : 314
SO₂ instrument Model : API 100 AH
Serial No. : 060
Fuel Type : Natural Gas
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
9:50 AM	4.73	57.28	4.90
9:51 AM	4.76	57.92	5.03
9:52 AM	4.75	58.24	5.10
9:53 AM	4.71	58.64	5.18
9:54 AM	4.75	58.53	5.20
9:55 AM	4.70	58.96	5.28
9:56 AM	4.70	58.66	5.27
9:57 AM	4.67	58.41	5.24
9:58 AM	4.70	57.81	5.16
9:59 AM	4.52	57.12	5.20
10:00 AM	4.73	56.67	5.17
10:01 AM	4.72	57.36	5.34
10:02 AM	4.74	57.51	5.46
10:03 AM	4.74	57.40	5.58
10:04 AM	4.67	57.74	5.44
10:05 AM	4.73	57.34	5.30
10:06 AM	4.78	57.67	5.21
10:07 AM	4.72	57.82	5.16
10:08 AM	4.66	57.23	5.03
10:09 AM	4.65	56.40	5.03
10:10 AM	4.75	56.78	5.07
Average	4.71	57.69	5.21

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

PTT Global Chemical Public Company Limited
EMISSION TEST RESULT

Date: March 4, 2023 **Run # :** 2
Start time: 10:11 AM **Location :** 432-H1
O₂ instrument Model: AMI 70 **Finish time :** 10:31 AM
NO_x instrument Model: API 200 AH **Serial No.:** 111117-2
SO₂ instrument Model: API 100 AH **Serial No.:** 314
Fuel Type : Natural Gas **Serial No.:** 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
10:11 AM	4.70	56.99	5.08
10:12 AM	4.67	56.60	5.07
10:13 AM	4.66	56.51	5.16
10:14 AM	4.65	56.55	5.23
10:15 AM	4.69	56.03	5.20
10:16 AM	4.65	56.03	5.20
10:17 AM	4.98	56.49	5.12
10:18 AM	5.05	58.15	5.20
10:19 AM	4.98	58.83	5.13
10:20 AM	4.89	58.19	5.06
10:21 AM	4.81	57.94	5.02
10:22 AM	4.72	57.19	5.06
10:23 AM	4.75	56.63	5.05
10:24 AM	4.89	56.79	5.14
10:25 AM	4.88	57.36	5.20
10:26 AM	4.82	57.94	5.22
10:27 AM	4.86	58.15	5.21
10:28 AM	4.80	58.70	5.25
10:29 AM	4.79	58.37	5.25
10:30 AM	4.71	58.21	5.24
10:31 AM	4.60	57.89	5.16
Average	4.79	57.41	5.15

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

PTT Global Chemical Public Company Limited
EMISSION TEST RESULT

Date: March 4, 2023 **Run # :** 3
Start time: 10:32 AM **Location :** 432-H1
O₂ instrument Model: AMI 70 **Finish time :** 10:52 AM
NO_x instrument Model: API 200 AH **Serial No.:** 111117-2
SO₂ instrument Model: API 100 AH **Serial No.:** 314
Fuel Type : Natural Gas **Serial No.:** 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
10:32 AM	4.54	57.20	5.19
10:33 AM	4.62	57.19	5.24
10:34 AM	4.39	56.40	5.22
10:35 AM	4.76	55.26	5.15
10:36 AM	4.86	56.90	5.21
10:37 AM	4.89	58.57	5.27
10:38 AM	4.86	58.73	5.25
10:39 AM	4.77	57.99	5.24
10:40 AM	4.76	57.23	5.22
10:41 AM	4.60	57.09	5.20
10:42 AM	4.63	56.28	5.23
10:43 AM	4.77	56.53	5.32
10:44 AM	4.75	57.74	5.29
10:45 AM	4.68	57.50	5.27
10:46 AM	4.74	57.57	5.28
10:47 AM	4.58	56.78	5.31
10:48 AM	4.66	56.30	5.28
10:49 AM	4.75	57.30	5.30
10:50 AM	4.71	57.84	5.36
10:51 AM	4.47	57.32	5.30
10:52 AM	4.82	56.95	5.29
Average	4.70	57.17	5.26

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/432-H1
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 04/03/2023
RECEIVED DATE	: 13/03/2023	ANALYTICAL DATE	: 14-24/03/2023
REPORT DATE	: 27/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 432-H1	OPERATOR	: Mr. Song Hengchwankul
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 40.84	m	Gas Velocity	: 6.1	m/s
Diameter	: 2.03	m	Flow rate ^{1/}	: 582	Ncu.m/min
Temperature	: 256.8	°C	Excess Oxygen	: 4.7	%
Moisture	: 12.5	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE METHOD
		4.7%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Sulfur Dioxide	ppm	5.19	4.46	0.13	60*/11.33**	0.31**	US EPA Method 6C
Oxide of Nitrogen	ppm	57.44	49.38	1.05	200*/88.50**	1.74**	US EPA Method 7E

Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. * Notification of Ministry of Industry, B.E.2549 (2006) and Notification of Ministry of Natural Resource and Environment, B.E.2549 (2006) (at 7 % O₂).

5. ** The assigned value in EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/432-H1
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 04/03/2023
RECEIVED DATE	: 07/03/2023	ANALYTICAL DATE	: 08/03/2023
REPORT DATE	: 13/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 432-H1	OPERATOR	: Mr. Pisanu Seenampeng
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 40.84	m	Gas Velocity	: 6.1	m/s
Diameter	: 2.03	m	Flow rate ^{1/}	: 582	Ncu.m/min
Temperature	: 256.8	°C	Excess Oxygen	: 4.7	%
Moisture	: 12.5	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE METHOD
		4.7%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Total Volatile Organic Compounds	ppm	1.90	1.64	0.033	-	-	US EPA Method 25A

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

2. This report shall not be reproduced, except in full, without official approval.

3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

**The Monitoring Result of Emission Concentration
432-H2**

PTT Global Chemical Public Co., Ltd.

(Branch 4 : Aromatics 1 Plant)

March 4, 2023

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	3.81	3.76	27.03	27.03	21.92
2	3.72	3.69	27.43	27.43	22.15
3	3.72	3.70	27.54	27.53	22.25
Average	3.75	3.72	27.34	27.33	22.11

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	3.81	3.76	5.19	5.17	4.19
2	3.72	3.69	5.61	5.59	4.51
3	3.72	3.70	5.94	5.92	4.78
Average	3.75	3.72	5.58	5.56	4.50

**PTT Global Chemical Public Company Limited
EMISSION TEST RESULT**

Date:	March 4, 2023	Run # :	1
Start time:	10:25 AM	Location :	432-H2
O₂ instrument Model:	AMI 70	Finish time :	10:45 AM
NO_x instrument Model:	API 200 AH	Serial No.:	071023-47
SO₂ instrument Model:	TELEDYNE 100 EH	Serial No.:	441
Fuel Type :	Natural Gas	Serial No.:	186
		Test Operator :	Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
10:25 AM	3.98	25.89	5.47
10:26 AM	3.82	26.06	5.43
10:27 AM	3.72	26.17	5.21
10:28 AM	3.60	26.09	5.47
10:29 AM	3.60	26.12	5.42
10:30 AM	3.58	26.20	5.41
10:31 AM	3.61	26.43	5.30
10:32 AM	3.69	26.64	5.81
10:33 AM	3.80	26.95	5.81
10:34 AM	3.74	26.99	5.50
10:35 AM	4.38	26.83	4.15
10:36 AM	4.41	27.55	5.09
10:37 AM	4.09	28.31	4.87
10:38 AM	3.73	28.31	4.62
10:39 AM	3.48	27.72	5.22
10:40 AM	3.72	27.20	4.01
10:41 AM	3.59	27.24	5.97
10:42 AM	3.88	27.21	6.12
10:43 AM	4.06	27.53	4.67
10:44 AM	3.86	28.19	4.42
10:45 AM	3.74	27.99	5.02
Average	3.81	27.03	5.19

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

PTT Global Chemical Public Company Limited EMISSION TEST RESULT

Date: March 4, 2023
Start time: 10:46 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: TELEDYNE 100 EH
Fuel Type : Natural Gas

Run # : 2
Location : 432-H2
Finish time : 11:06 AM
Serial No.: 071023-47
Serial No.: 441
Serial No.: 186
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
10:46 AM	3.71	27.51	5.50
10:47 AM	3.70	27.35	5.70
10:48 AM	3.94	27.39	5.68
10:49 AM	3.98	27.71	5.62
10:50 AM	3.80	28.01	5.75
10:51 AM	3.82	27.92	5.68
10:52 AM	4.15	27.58	5.83
10:53 AM	3.83	27.86	5.56
10:54 AM	3.77	27.81	5.54
10:55 AM	3.67	27.56	5.48
10:56 AM	3.65	27.41	4.89
10:57 AM	3.59	27.22	4.01
10:58 AM	3.56	27.07	5.67
10:59 AM	3.57	27.00	5.62
11:00 AM	3.57	27.09	5.61
11:01 AM	3.56	27.13	5.50
11:02 AM	3.53	27.13	6.01
11:03 AM	3.47	27.01	6.01
11:04 AM	3.74	27.38	5.70
11:05 AM	3.69	27.49	6.21
11:06 AM	3.72	27.49	6.21
Average	3.72	27.43	5.61

Signature Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist

PTT Global Chemical Public Company Limited EMISSION TEST RESULT

Date: March 4, 2023
Start time: 11:07 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: TELEDYNE 100 EH
Fuel Type : Natural Gas

Run # : 3
Location : 432-H2
Finish time : 11:27 AM
Serial No.: 071023-47
Serial No.: 441
Serial No.: 186
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:07 AM	3.68	27.21	5.94
11:08 AM	3.73	27.26	5.81
11:09 AM	3.76	27.45	6.05
11:10 AM	3.71	27.57	6.17
11:11 AM	3.67	27.53	6.03
11:12 AM	3.68	27.36	5.98
11:13 AM	3.67	27.34	5.77
11:14 AM	3.72	27.54	5.97
11:15 AM	3.82	27.44	5.95
11:16 AM	3.82	27.39	5.89
11:17 AM	3.68	27.76	6.02
11:18 AM	3.83	27.42	5.95
11:19 AM	3.76	27.48	6.10
11:20 AM	3.69	27.82	5.83
11:21 AM	3.73	27.84	5.81
11:22 AM	3.75	27.78	5.75
11:23 AM	3.66	27.65	5.88
11:24 AM	3.63	27.78	5.81
11:25 AM	3.61	27.84	5.96
11:26 AM	3.68	27.51	6.01
11:27 AM	3.79	27.42	5.98
Average	3.72	27.54	5.94

Signature Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/432-H2
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 04/03/2023
RECEIVED DATE	: 13/03/2023	ANALYTICAL DATE	: 14-24/03/2023
REPORT DATE	: 27/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 432-H2	OPERATOR	: Mr. Song Hengchwankul
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 32.06	m	Gas Velocity	: 5.3	m/s
Diameter	: 1.28	m	Flow rate ^{1/}	: 193	Ncu.m/min
Temperature	: 280.5	°C	Excess Oxygen	: 3.7	%
Moisture	: 11.7	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE METHOD
		3.7%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Sulfur Dioxide	ppm	5.56	4.50	0.05	60*/11.56**	0.08**	US EPA Method 6C
Oxide of Nitrogen	ppm	27.33	22.11	0.17	200*/84.46**	0.42**	US EPA Method 7E

Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. * Notification of Ministry of Industry, B.E.2549 (2006) and Notification of Ministry of Natural Resource and Environment, B.E.2549 (2006) (at 7 % O₂).

5. ** The assigned value in EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/432-H2
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 04/03/2023
RECEIVED DATE	: 07/03/2023	ANALYTICAL DATE	: 08/03/2023
REPORT DATE	: 13/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 432-H2	OPERATOR	: Mr. Pisanu Seenampeng
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 32.06	m	Gas Velocity	: 5.3	m/s
Diameter	: 1.28	m	Flow rate ^{1/}	: 193	Ncu.m/min
Temperature	: 280.5	°C	Excess Oxygen	: 3.7	%
Moisture	: 11.7	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE METHOD
		3.7%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Total Volatile Organic Compounds	ppm	1.63	1.32	0.009	-	-	US EPA Method 25A

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)
Analyst

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

**The Monitoring Result of Emission Concentration
432-H3**

PTT Global Chemical Public Co., Ltd.

(Branch 4 : Aromatics 1 Plant)

April 5, 2023

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	6.51	6.46	60.93	61.02	58.74
2	6.51	6.48	61.50	61.61	59.39
3	6.51	6.50	61.82	61.94	59.79
Average	6.51	6.48	61.42	61.52	59.30

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	6.51	6.46	3.69	3.66	3.52
2	6.51	6.48	3.63	3.60	3.47
3	6.51	6.50	3.62	3.59	3.47
Average	6.51	6.48	3.65	3.62	3.49

**PTT Global Chemical Public Company Limited
EMISSION TEST RESULT**

Date: <u>April 5, 2023</u>	Run # : <u>1</u>
Start time: <u>2:30 PM</u>	Location : <u>432-H3</u>
O₂ instrument Model: <u>AMI 70</u>	Finish time : <u>2:50 PM</u>
NO_x instrument Model: <u>API 200 AH</u>	Serial No.: <u>121121-10</u>
SO₂ instrument Model: <u>API 100 AH</u>	Serial No.: <u>342</u>
Fuel Type : <u>Natural Gas</u>	Serial No.: <u>132</u>
	Test Operator : <u>Song H.</u>

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
2:30 PM	6.54	60.18	3.68
2:31 PM	6.52	60.84	3.68
2:32 PM	6.51	61.09	3.71
2:33 PM	6.48	61.24	3.73
2:34 PM	6.51	61.27	3.75
2:35 PM	6.54	61.36	3.74
2:36 PM	6.54	61.47	3.72
2:37 PM	6.47	61.45	3.71
2:38 PM	6.53	61.31	3.69
2:39 PM	6.51	61.31	3.69
2:40 PM	6.53	61.34	3.71
2:41 PM	6.52	61.49	3.74
2:42 PM	6.53	61.28	3.67
2:43 PM	6.49	60.36	3.67
2:44 PM	6.53	60.02	3.67
2:45 PM	6.47	60.45	3.67
2:46 PM	6.48	60.79	3.67
2:47 PM	6.47	60.51	3.67
2:48 PM	6.52	60.40	3.67
2:49 PM	6.54	60.60	3.67
2:50 PM	6.54	60.78	3.64
Average	6.51	60.93	3.69

Signature _____

(Miss Katesarin Vorradeftwittaya)

Environmental Scientist

PTT Global Chemical Public Company Limited
EMISSION TEST RESULT

Date: April 5, 2023 **Run # :** 2
Start time: 2:51 PM **Location :** 432-H3
O₂ instrument Model: AMI 70 **Finish time :** 3:11 PM
NO_x instrument Model: API 200 AH **Serial No.:** 121121-10
SO₂ instrument Model: API 100 AH **Serial No.:** 342
Fuel Type : Natural Gas **Serial No.:** 132
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
2:51 PM	6.51	61.05	3.65
2:52 PM	6.54	61.32	3.64
2:53 PM	6.49	61.38	3.64
2:54 PM	6.49	61.30	3.64
2:55 PM	6.54	61.42	3.64
2:56 PM	6.54	61.43	3.64
2:57 PM	6.43	61.06	3.63
2:58 PM	6.47	60.42	3.64
2:59 PM	6.51	61.98	3.63
3:00 PM	6.53	62.07	3.63
3:01 PM	6.52	60.98	3.63
3:02 PM	6.54	62.42	3.62
3:03 PM	6.51	61.39	3.61
3:04 PM	6.53	60.81	3.61
3:05 PM	6.51	61.96	3.62
3:06 PM	6.54	61.71	3.62
3:07 PM	6.54	61.77	3.63
3:08 PM	6.54	61.46	3.63
3:09 PM	6.54	61.60	3.63
3:10 PM	6.51	62.14	3.64
3:11 PM	6.43	61.85	3.63
Average	6.51	61.50	3.63

Signature



(Miss Katesarin Vorradetwittaya)

Environmental Scientist

PTT Global Chemical Public Company Limited
EMISSION TEST RESULT

Date: April 5, 2023 **Run # :** 3
Start time: 3:12 PM **Location :** 432-H3
O₂ instrument Model: AMI 70 **Finish time :** 3:32 PM
NO_x instrument Model: API 200 AH **Serial No.:** 121121-10
SO₂ instrument Model: API 100 AH **Serial No.:** 342
Fuel Type : Natural Gas **Serial No.:** 132
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
3:12 PM	6.45	62.28	3.63
3:13 PM	6.48	61.65	3.62
3:14 PM	6.52	61.79	3.62
3:15 PM	6.54	61.98	3.63
3:16 PM	6.48	61.74	3.64
3:17 PM	6.54	61.99	3.63
3:18 PM	6.54	62.27	3.63
3:19 PM	6.53	62.26	3.62
3:20 PM	6.54	61.83	3.61
3:21 PM	6.54	61.72	3.61
3:22 PM	6.54	61.78	3.61
3:23 PM	6.53	61.73	3.61
3:24 PM	6.49	61.61	3.61
3:25 PM	6.54	61.42	3.62
3:26 PM	6.46	61.29	3.62
3:27 PM	6.47	61.80	3.61
3:28 PM	6.54	61.34	3.61
3:29 PM	6.47	61.78	3.61
3:30 PM	6.49	62.02	3.61
3:31 PM	6.51	61.86	3.61
3:32 PM	6.46	62.02	3.61
Average	6.51	61.82	3.62

Signature



(Miss Katesarin Vorradetwittaya)

Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/432-H3
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 05/04/2023
RECEIVED DATE	: 10/04/2023	ANALYTICAL DATE	: 17/04/2023-04/05/2023
REPORT DATE	: 05/05/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 432-H3	OPERATOR	: Mr. Song Hengchwankul
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas
STACK DESCRIPTION			

Height	: 46.05	m	Gas Velocity	: 9.0	m/s
Diameter	: 2.66	m	Flow rate ^{1/}	: 1,614	Ncu.m/min
Temperature	: 220.2	°C	Excess Oxygen	: 6.5	%
Moisture	: 10.7	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		6.5%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Sulfur Dioxide	ppm	3.62	3.49	0.25	60*/12.88**	0.61**	US EPA Method 6C
Oxide of Nitrogen	ppm	61.52	59.30	3.11	200*/94.63**	3.22**	US EPA Method 7E

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. * Notification of Ministry of Industry, B.E.2549 (2006) and Notification of Ministry of Natural Resource and Environment, B.E.2549 (2006) (at 7 % O₂).

5. ** The assigned value in EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/432-H3
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 05/04/2023
RECEIVED DATE	: 06/04/2023	ANALYTICAL DATE	: 06/04/2023
REPORT DATE	: 19/04/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 432-H3	OPERATOR	: Mr. Supakit Tamooka
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas
STACK DESCRIPTION			

Height	: 46.05	m	Gas Velocity	: 9.0	m/s
Diameter	: 2.66	m	Flow rate ^{1/}	: 1,614	Ncu.m/min
Temperature	: 220.2	°C	Excess Oxygen	: 6.5	%
Moisture	: 10.7	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		6.5%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Total Volatile Organic Compounds	ppm	0.86	0.83	0.042	-	-	US EPA Method 25A

(Miss Sudaporn Soonthorn)
Analyst

(Miss Narisa Poowasanpetch)
Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

2. This report shall not be reproduced, except in full, without official approval.

3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

**The Monitoring Result of Emission Concentration
320-H1/H2**

PTT Global Chemical Public Co., Ltd.

(Branch 4 : Aromatics 1 Plant)

March 8, 2023

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	3.49	3.45	30.52	30.51	24.30
2	3.48	3.46	30.43	30.42	24.25
3	3.51	3.50	30.54	30.53	24.39
Average	3.49	3.47	30.50	30.49	24.31

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	3.49	3.45	6.83	6.79	5.41
2	3.48	3.46	6.86	6.82	5.44
3	3.51	3.50	6.84	6.80	5.43
Average	3.49	3.47	6.84	6.80	5.43

**PTT Global Chemical Public Company Limited
EMISSION TEST RESULT**

Date:	March 8, 2023	Run # :	1
Start time:	10:30 AM	Location :	320-H1/H2
O₂ instrument Model:	AMI 70	Finish time :	10:50 AM
NO_x instrument Model:	API 200 AH	Serial No.:	071023-47
SO₂ instrument Model:	TELEDYNE 100 EH	Serial No.:	441
Fuel Type :	Natural Gas	Serial No.:	186
		Test Operator :	Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
10:30 AM	3.51	30.87	6.95
10:31 AM	3.53	30.72	6.82
10:32 AM	3.52	30.65	6.76
10:33 AM	3.52	30.46	6.53
10:34 AM	3.55	30.49	6.86
10:35 AM	3.57	30.58	6.87
10:36 AM	3.55	30.93	6.96
10:37 AM	3.48	30.86	6.74
10:38 AM	3.49	30.10	6.68
10:39 AM	3.46	30.15	6.85
10:40 AM	3.46	30.75	6.93
10:41 AM	3.53	30.70	6.89
10:42 AM	3.43	30.67	6.88
10:43 AM	3.42	30.59	6.83
10:44 AM	3.48	29.95	7.00
10:45 AM	3.52	30.17	6.82
10:46 AM	3.49	30.27	6.72
10:47 AM	3.47	30.53	6.98
10:48 AM	3.47	30.33	6.81
10:49 AM	3.46	30.41	6.67
10:50 AM	3.48	30.77	6.80
Average	3.49	30.52	6.83

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

PTT Global Chemical Public Company Limited EMISSION TEST RESULT

Date: March 8, 2023
Start time: 10:51 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: TELEDYNE 100 EH
Fuel Type : Natural Gas

Run # : 2
Location : 320-H1/H2
Finish time : 11:11 AM
Serial No.: 071023-47
Serial No.: 441
Serial No.: 186
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
10:51 AM	3.51	30.60	6.70
10:52 AM	3.51	30.61	6.68
10:53 AM	3.45	30.71	6.84
10:54 AM	3.47	30.09	6.83
10:55 AM	3.53	29.96	6.86
10:56 AM	3.55	30.42	6.72
10:57 AM	3.44	30.35	6.78
10:58 AM	3.45	30.56	6.81
10:59 AM	3.49	30.36	7.03
11:00 AM	3.45	30.48	6.79
11:01 AM	3.47	30.78	6.94
11:02 AM	3.49	30.51	7.02
11:03 AM	3.47	30.58	6.88
11:04 AM	3.47	30.03	6.94
11:05 AM	3.49	30.05	6.82
11:06 AM	3.47	29.92	6.79
11:07 AM	3.46	30.38	6.65
11:08 AM	3.48	30.51	6.84
11:09 AM	3.49	30.85	7.10
11:10 AM	3.47	30.81	7.11
11:11 AM	3.46	30.47	6.94
Average	3.48	30.43	6.86

Signature Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist

PTT Global Chemical Public Company Limited EMISSION TEST RESULT

Date: March 8, 2023
Start time: 11:12 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: TELEDYNE 100 EH
Fuel Type : Natural Gas

Run # : 3
Location : 320-H1/H2
Finish time : 11:32 AM
Serial No.: 071023-47
Serial No.: 441
Serial No.: 186
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:12 AM	3.49	30.69	6.92
11:13 AM	3.46	30.73	6.73
11:14 AM	3.47	30.74	6.87
11:15 AM	3.46	31.39	6.89
11:16 AM	3.50	31.05	6.97
11:17 AM	3.49	30.63	6.94
11:18 AM	3.43	30.75	6.79
11:19 AM	3.47	30.42	6.78
11:20 AM	3.45	30.26	6.74
11:21 AM	3.46	30.24	6.34
11:22 AM	3.50	30.30	7.11
11:23 AM	3.55	30.36	7.12
11:24 AM	3.57	30.65	6.87
11:25 AM	3.57	30.55	6.69
11:26 AM	3.54	30.73	6.75
11:27 AM	3.51	30.46	6.86
11:28 AM	3.52	30.43	6.76
11:29 AM	3.56	30.34	6.90
11:30 AM	3.53	30.02	6.98
11:31 AM	3.56	30.18	6.91
11:32 AM	3.53	30.35	6.77
Average	3.51	30.54	6.84

Signature Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/320-H1/H2
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 08/03/2023
RECEIVED DATE	: 13/03/2023	ANALYTICAL DATE	: 14-24/03/2023
REPORT DATE	: 27/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 320-H1/H2	OPERATOR	: Mr. Song Hengchwankul
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 43.20	m	Gas Velocity	: 8.2	m/s
Diameter	: 1.74	m	Flow rate ^{1/}	: 517	Ncu.m/min
Temperature	: 325.7	°C	Excess Oxygen	: 3.5	%
Moisture	: 11.5	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		3.5%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Sulfur Dioxide	ppm	6.80	5.43	0.15	60*/12.39**	0.28**	US EPA Method 6C
Oxide of Nitrogen	ppm	30.49	24.31	0.49	200*/66.49**	1.08**	US EPA Method 7E

Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

Preeda S.

(Miss Preeda Somjai)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

2. This report shall not be reproduced, except in full, without official approval.

3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. * Notification of Ministry of Industry, B.E.2549 (2006) and Notification of Ministry of Natural Resource and Environment, B.E.2549 (2006) (at 7 % O₂).

5. ** The assigned value in EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/320-H1/H2
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 08/03/2023
RECEIVED DATE	: 10/03/2023	ANALYTICAL DATE	: 13/03/2023
REPORT DATE	: 17/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 320-H1/H2	OPERATOR	: Mr. Pisanu Seenampeng
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 43.20	m	Gas Velocity	: 8.2	m/s
Diameter	: 1.74	m	Flow rate ^{1/}	: 517	Ncu.m/min
Temperature	: 325.7	°C	Excess Oxygen	: 3.5	%
Moisture	: 11.5	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		3.5%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Total Volatile Organic Compounds	ppm	6.40	5.10	0.099	-	-	US EPA Method 25A

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

2. This report shall not be reproduced, except in full, without official approval.

3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

**The Monitoring Result of Emission Concentration
390-H1**

PTT Global Chemical Public Co., Ltd.

(Branch 4 : Aromatics 1 Plant)

March 3, 2023

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	5.94	5.87	30.76	30.76	28.45
2	6.02	5.97	29.92	29.91	27.85
3	6.08	6.05	30.57	30.56	28.60
Average	6.01	5.96	30.42	30.41	28.30

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	5.94	5.87	1.22	1.19	1.10
2	6.02	5.97	1.22	1.19	1.11
3	6.08	6.05	1.27	1.23	1.15
Average	6.01	5.96	1.24	1.20	1.12

MTR 390-H1/Run1/28-03-23

**PTT Global Chemical Public Company Limited
EMISSION TEST RESULT**

Date: <u>March 3, 2023</u>	Run # : <u>1</u>
Start time: <u>10:30 AM</u>	Location : <u>390-H1</u>
O₂ instrument Model: <u>AMI 70</u>	Finish time : <u>10:50 AM</u>
NO_x instrument Model: <u>API 200 AH</u>	Serial No.: <u>071023-47</u>
SO₂ instrument Model: <u>TELEDYNE 100 EH</u>	Serial No.: <u>441</u>
Fuel Type : <u>Natural Gas</u>	Serial No.: <u>186</u>
	Test Operator : <u>Song H.</u>

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
10:30 AM	6.07	33.01	1.21
10:31 AM	6.01	32.02	1.21
10:32 AM	5.95	31.32	1.22
10:33 AM	5.99	30.73	1.19
10:34 AM	5.91	30.45	1.23
10:35 AM	5.81	30.42	1.23
10:36 AM	5.88	30.36	1.23
10:37 AM	5.78	30.47	1.23
10:38 AM	5.86	30.32	1.23
10:39 AM	5.96	30.28	1.18
10:40 AM	5.94	30.49	1.22
10:41 AM	5.92	30.75	1.19
10:42 AM	5.93	30.72	1.23
10:43 AM	5.97	30.81	1.23
10:44 AM	6.05	30.60	1.23
10:45 AM	6.07	30.47	1.23
10:46 AM	6.02	30.48	1.23
10:47 AM	5.90	30.68	1.19
10:48 AM	5.90	30.92	1.22
10:49 AM	5.94	30.49	1.18
10:50 AM	5.93	30.15	1.23
Average	5.94	30.76	1.22

Signature Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist

PTT Global Chemical Public Company Limited EMISSION TEST RESULT

Run # : 2
Date: March 3, 2023
Start time: 10:51 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: TELEDYNE 100 EH
Fuel Type : Natural Gas
Location : 390-H1
Finish time : 11:11 AM
Serial No.: 071023-47
Serial No.: 441
Serial No.: 186
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
10:51 AM	5.83	30.01	1.21
10:52 AM	5.88	30.18	1.21
10:53 AM	5.85	30.05	1.22
10:54 AM	5.97	29.59	1.19
10:55 AM	5.90	29.49	1.23
10:56 AM	5.98	29.44	1.23
10:57 AM	6.09	29.85	1.23
10:58 AM	6.17	30.20	1.23
10:59 AM	6.09	29.97	1.23
11:00 AM	6.04	29.99	1.19
11:01 AM	6.05	30.32	1.18
11:02 AM	6.05	30.26	1.18
11:03 AM	6.02	29.96	1.19
11:04 AM	6.00	29.99	1.22
11:05 AM	6.02	29.86	1.23
11:06 AM	6.06	29.63	1.24
11:07 AM	6.03	29.81	1.23
11:08 AM	6.11	29.98	1.23
11:09 AM	6.06	29.81	1.22
11:10 AM	6.02	29.87	1.23
11:11 AM	6.11	30.10	1.24
Average	6.02	29.92	1.22

Signature Ladawan W.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist

PTT Global Chemical Public Company Limited EMISSION TEST RESULT

Run # : 3
Date: March 3, 2023
Start time: 11:12 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: TELEDYNE 100 EH
Fuel Type : Natural Gas
Location : 390-H1
Finish time : 11:32 AM
Serial No.: 071023-47
Serial No.: 441
Serial No.: 186
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:12 AM	6.08	29.92	1.23
11:13 AM	6.02	29.90	1.24
11:14 AM	6.03	30.15	1.24
11:15 AM	6.11	30.26	1.24
11:16 AM	6.09	30.33	1.24
11:17 AM	6.07	30.37	1.24
11:18 AM	6.11	30.43	1.26
11:19 AM	5.99	30.50	1.29
11:20 AM	6.05	30.50	1.24
11:21 AM	6.10	30.43	1.28
11:22 AM	6.07	30.27	1.29
11:23 AM	6.13	30.53	1.30
11:24 AM	6.11	30.56	1.31
11:25 AM	6.10	30.59	1.31
11:26 AM	6.22	30.53	1.31
11:27 AM	6.18	30.58	1.31
11:28 AM	6.14	30.70	1.24
11:29 AM	6.09	30.81	1.26
11:30 AM	6.04	30.82	1.29
11:31 AM	6.02	31.88	1.29
11:32 AM	5.98	31.84	1.30
Average	6.08	30.57	1.27

Signature Ladawan W.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/390-H1
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 03/03/2023
RECEIVED DATE	: 13/03/2023	ANALYTICAL DATE	: 14-24/03/2023
REPORT DATE	: 27/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 390-H1	OPERATOR	: Mr. Song Hengchwankul
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 34.80	m	Gas Velocity	: 3.2	m/s
Diameter	: 0.89	m	Flow rate ^{1/}	: 62	Ncu.m/min
Temperature	: 227.2	°C	Excess Oxygen	: 6.0	%
Moisture	: 11.9	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		6.0%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Sulfur Dioxide	ppm	1.20	1.12	0.003	60*/11.50**	0.03**	US EPA Method 6C
Oxide of Nitrogen	ppm	30.41	28.30	0.06	200*/79.99**	0.15**	US EPA Method 7E

Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

Preeda S.

(Miss Preeda Somjai)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

2. This report shall not be reproduced, except in full, without official approval.

3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. * Notification of Ministry of Industry, B.E.2549 (2006) and Notification of Ministry of Natural Resource and Environment, B.E.2549 (2006) (at 7 % O₂).

5. ** The assigned value in EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/390-H1
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 03/03/2023
RECEIVED DATE	: 04/03/2023	ANALYTICAL DATE	: 04/03/2023
REPORT DATE	: 13/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 390-H1	OPERATOR	: Mr. Pisanu Seenampeng
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 34.80	m	Gas Velocity	: 3.2	m/s
Diameter	: 0.89	m	Flow rate ^{1/}	: 62	Ncu.m/min
Temperature	: 227.2	°C	Excess Oxygen	: 6.0	%
Moisture	: 11.9	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		6.0%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Total Volatile Organic Compounds	ppm	1.70	1.58	0.003	-	-	US EPA Method 25A

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

**The Monitoring Result of Emission Concentration
390-H2**

PTT Global Chemical Public Co., Ltd.

(Branch 4 : Aromatics 1 Plant)

March 3, 2023

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	6.29	6.22	37.72	37.72	35.72
2	6.26	6.19	37.47	37.47	35.41
3	6.20	6.13	37.27	37.27	35.07
Average	6.25	6.18	37.49	37.49	35.40

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	6.29	6.22	3.55	3.53	3.34
2	6.26	6.19	3.85	3.83	3.62
3	6.20	6.13	3.88	3.86	3.63
Average	6.25	6.18	3.76	3.74	3.53

**PTT Global Chemical Public Company Limited
EMISSION TEST RESULT**

Date:	March 3, 2023	Run # :	1
Start time:	10:30 AM	Location :	390-H2
O₂ instrument Model:	AMI 70	Finish time :	10:50 AM
NO_x instrument Model:	API 200 AH	Serial No.:	111117-2
SO₂ instrument Model:	API 100 AH	Serial No.:	314
Fuel Type :	Natural Gas	Serial No.:	060
		Test Operator :	Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
10:30 AM	6.23	36.92	3.65
10:31 AM	6.31	37.35	3.46
10:32 AM	6.33	37.65	3.57
10:33 AM	6.32	37.56	3.48
10:34 AM	6.22	37.31	3.43
10:35 AM	6.18	37.88	3.56
10:36 AM	6.20	37.82	3.53
10:37 AM	6.24	38.27	3.51
10:38 AM	6.40	38.09	3.55
10:39 AM	6.37	37.91	3.56
10:40 AM	6.41	37.67	3.61
10:41 AM	6.31	37.56	3.69
10:42 AM	6.20	37.74	3.67
10:43 AM	6.20	37.85	3.34
10:44 AM	6.28	37.77	3.57
10:45 AM	6.30	37.79	3.47
10:46 AM	6.32	37.92	3.52
10:47 AM	6.31	37.52	3.51
10:48 AM	6.36	37.88	3.59
10:49 AM	6.31	37.95	3.62
10:50 AM	6.28	37.70	3.65
Average	6.29	37.72	3.55

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

PTT Global Chemical Public Company Limited EMISSION TEST RESULT

Run # : 2
Date: March 3, 2023
Start time: 10:51 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: API 100 AH
Fuel Type : Natural Gas
Location : 390-H2
Finish time : 11:11 AM
Serial No.: 111117-2
Serial No.: 314
Serial No.: 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
10:51 AM	6.27	37.59	3.73
10:52 AM	6.28	37.82	3.75
10:53 AM	6.26	37.49	3.77
10:54 AM	6.35	37.21	3.82
10:55 AM	6.27	37.55	3.82
10:56 AM	6.35	37.56	3.82
10:57 AM	6.40	37.37	3.84
10:58 AM	6.31	37.44	3.84
10:59 AM	6.35	37.83	3.92
11:00 AM	6.31	37.36	3.92
11:01 AM	6.22	37.11	3.92
11:02 AM	6.20	37.03	3.89
11:03 AM	6.16	37.38	3.91
11:04 AM	6.13	37.71	4.01
11:05 AM	6.22	37.80	3.84
11:06 AM	6.25	37.57	3.81
11:07 AM	6.25	37.49	4.03
11:08 AM	6.33	37.51	3.81
11:09 AM	6.22	37.25	3.82
11:10 AM	6.19	37.50	3.85
11:11 AM	6.23	37.32	3.82
Average	6.26	37.47	3.85

Signature Ladawan W.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist

PTT Global Chemical Public Company Limited EMISSION TEST RESULT

Run # : 3
Date: March 3, 2023
Start time: 11:12 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: API 100 AH
Fuel Type : Natural Gas
Location : 390-H2
Finish time : 11:32 AM
Serial No.: 111117-2
Serial No.: 314
Serial No.: 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:12 AM	6.16	37.60	3.78
11:13 AM	6.28	37.94	3.79
11:14 AM	6.30	37.70	3.84
11:15 AM	6.35	37.27	3.90
11:16 AM	6.13	37.08	3.91
11:17 AM	5.98	37.56	3.98
11:18 AM	6.05	37.31	3.97
11:19 AM	6.16	37.25	3.98
11:20 AM	6.22	37.40	3.97
11:21 AM	6.28	37.66	3.93
11:22 AM	6.25	37.35	3.93
11:23 AM	6.19	37.37	3.96
11:24 AM	6.23	37.56	3.95
11:25 AM	6.21	37.30	3.99
11:26 AM	6.08	37.18	3.96
11:27 AM	6.18	35.35	3.65
11:28 AM	6.30	37.28	3.57
11:29 AM	6.26	37.02	3.69
11:30 AM	6.18	37.31	3.70
11:31 AM	6.19	37.15	3.84
11:32 AM	6.27	37.13	4.11
Average	6.20	37.27	3.88

Signature Ladawan W.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist



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TEL : +66(0) 2959-3600 FAX : +66(0) 2959-3535 E-mail : envserv@secot.co.th

STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/390-H2
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 03/03/2023
RECEIVED DATE	: 13/03/2023	ANALYTICAL DATE	: 14-24/03/2023
REPORT DATE	: 27/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 390-H2	OPERATOR	: Mr. Song Hengchwankul
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 30.00	m	Gas Velocity	: 6.1	m/s
Diameter	: 0.94	m	Flow rate ^{1/}	: 127	Ncu.m/min
Temperature	: 246.3	°C	Excess Oxygen	: 6.2	%
Moisture	: 11.7	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		6.2%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Sulfur Dioxide	ppm	3.74	3.53	0.02	60*/12.26**	0.06**	US EPA Method 6C
Oxide of Nitrogen	ppm	37.49	35.40	0.15	200*/59.71**	0.21**	US EPA Method 7E

Ladawan N.
(Miss Ladawan Wongcharoen)

Environmental Scientist

Preeda S.
(Miss Preeda Somjai)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.

2. This report shall not be reproduced, except in full, without official approval.

3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. * Notification of Ministry of Industry, B.E.2549 (2006) and Notification of Ministry of Natural Resource and Environment, B.E.2549 (2006) (at 7 % O₂).

5. ** The assigned value in EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/390-H2
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 03/03/2023
RECEIVED DATE	: 04/03/2023	ANALYTICAL DATE	: 04/03/2023
REPORT DATE	: 13/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 390-H2	OPERATOR	: Mr. Pisanu Seenampeng
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 30.00	m	Gas Velocity	: 6.1	m/s
Diameter	: 0.94	m	Flow rate ^{1/}	: 127	Ncu.m/min
Temperature	: 246.3	°C	Excess Oxygen	: 6.2	%
Moisture	: 11.7	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		6.2%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Total Volatile Organic Compounds	ppm	4.13	3.90	0.016	-	-	US EPA Method 25A

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

**The Monitoring Result of Emission Concentration
940-H1**

PTT Global Chemical Public Co., Ltd.

(Branch 4 : Aromatics 1 Plant)

March 3, 2023

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	5.03	4.98	99.33	99.39	86.78
2	4.96	4.93	101.53	101.59	88.42
3	4.95	4.94	100.12	100.18	87.25
Average	4.98	4.95	100.33	100.39	87.48

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	5.03	4.98	4.62	4.60	4.02
2	4.96	4.93	4.62	4.60	4.00
3	4.95	4.94	4.64	4.62	4.02
Average	4.98	4.95	4.62	4.61	4.01

MTR 940-H1/Run1/28-03-23

**PTT Global Chemical Public Company Limited
EMISSION TEST RESULT**

Date: <u>March 3, 2023</u>	Run # : <u>1</u>
Start time: <u>12:30 PM</u>	Location : <u>940-H1</u>
O₂ instrument Model: <u>AMI 70</u>	Finish time : <u>12:50 PM</u>
NO_x instrument Model: <u>API 200 AH</u>	Serial No.: <u>111117-2</u>
SO₂ instrument Model: <u>API 100 AH</u>	Serial No.: <u>314</u>
Fuel Type : <u>Natural Gas</u>	Serial No.: <u>060</u>
	Test Operator : <u>Song H.</u>

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
12:30 PM	5.02	94.22	4.55
12:31 PM	5.04	95.54	4.56
12:32 PM	5.07	96.30	4.65
12:33 PM	5.09	97.90	4.66
12:34 PM	5.09	99.56	4.72
12:35 PM	5.12	100.43	4.75
12:36 PM	5.03	100.35	4.83
12:37 PM	4.97	100.56	4.87
12:38 PM	4.96	100.57	4.50
12:39 PM	4.98	99.99	4.55
12:40 PM	5.01	100.18	4.56
12:41 PM	5.02	100.38	4.54
12:42 PM	5.01	100.18	4.48
12:43 PM	5.06	100.02	4.53
12:44 PM	5.08	99.52	4.53
12:45 PM	5.02	99.81	4.54
12:46 PM	5.00	100.04	4.63
12:47 PM	4.98	99.50	4.67
12:48 PM	4.97	99.15	4.65
12:49 PM	4.99	100.39	4.68
12:50 PM	5.04	101.26	4.63
Average	5.03	99.33	4.62

Signature Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist

PTT Global Chemical Public Company Limited
EMISSION TEST RESULT

Date: March 3, 2023 **Run # : 2**
Start time: 12:51 PM **Location :** 940-H1
O₂ instrument Model: AMI 70 **Finish time :** 1:11 PM
NO_x instrument Model: API 200 AH **Serial No.:** 111117-2
SO₂ instrument Model: API 100 AH **Serial No.:** 314
Fuel Type : Natural Gas **Serial No.:** 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
12:51 PM	5.04	101.70	4.61
12:52 PM	5.02	101.72	4.60
12:53 PM	5.02	100.59	4.57
12:54 PM	4.93	100.33	4.56
12:55 PM	4.92	100.68	4.57
12:56 PM	4.96	100.62	4.61
12:57 PM	4.96	100.46	4.65
12:58 PM	5.00	101.36	4.59
12:59 PM	4.96	102.02	4.64
1:00 PM	4.97	102.76	4.64
1:01 PM	4.99	103.16	4.61
1:02 PM	4.95	102.50	4.60
1:03 PM	4.99	102.68	4.59
1:04 PM	4.97	102.51	4.59
1:05 PM	4.93	102.14	4.57
1:06 PM	4.96	101.43	4.63
1:07 PM	4.93	100.73	4.64
1:08 PM	4.94	101.05	4.60
1:09 PM	4.90	101.60	4.65
1:10 PM	4.92	100.97	4.69
1:11 PM	4.92	101.18	4.72
Average	4.96	101.53	4.62

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

PTT Global Chemical Public Company Limited
EMISSION TEST RESULT

Date: March 3, 2023 **Run # : 3**
Start time: 1:12 PM **Location :** 940-H1
O₂ instrument Model: AMI 70 **Finish time :** 1:32 PM
NO_x instrument Model: API 200 AH **Serial No.:** 111117-2
SO₂ instrument Model: API 100 AH **Serial No.:** 314
Fuel Type : Natural Gas **Serial No.:** 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
1:12 PM	4.90	101.47	4.67
1:13 PM	4.92	101.72	4.63
1:14 PM	4.91	101.39	4.62
1:15 PM	4.95	100.74	4.58
1:16 PM	4.93	101.39	4.66
1:17 PM	4.92	101.36	4.67
1:18 PM	4.91	101.96	4.68
1:19 PM	4.87	103.03	4.68
1:20 PM	4.89	102.14	4.67
1:21 PM	4.92	100.48	4.60
1:22 PM	4.98	100.29	4.67
1:23 PM	4.97	100.69	4.63
1:24 PM	4.98	99.50	4.67
1:25 PM	5.06	99.11	4.63
1:26 PM	5.05	98.92	4.56
1:27 PM	4.95	98.02	4.55
1:28 PM	4.93	97.76	4.58
1:29 PM	4.92	98.32	4.62
1:30 PM	4.93	97.93	4.64
1:31 PM	4.95	97.99	4.67
1:32 PM	5.03	98.25	4.67
Average	4.95	100.12	4.64

Signature Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/940-H1 (Boiler)
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 03/03/2023
RECEIVED DATE	: 13/03/2023	ANALYTICAL DATE	: 14-24/03/2023
REPORT DATE	: 27/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 940-H1 (Boiler)	OPERATOR	: Mr. Song Hengchwankul
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 30.00	m	Gas Velocity	: 6.5	m/s
Diameter	: 1.35	m	Flow rate ^{1/}	: 313	Ncu.m/min
Temperature	: 192.3	°C	Excess Oxygen	: 5.0	%
Moisture	: 12.4	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		5.0%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Sulfur Dioxide	ppm	4.61	4.01	0.06	60*/10.39**	0.15**	US EPA Method 6C
Oxide of Nitrogen	ppm	100.39	87.48	0.98	200*/102.19**	1.06**	US EPA Method 7E

Ladawan W.

(Miss Ladawan Wongcharoen)

Environmental Scientist

Preeda S.

(Miss Preeda Somjai)

Technical Management Team

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

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5. ** The assigned value in EIA report.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 223096MON1H-Stk/940-H1 (Boiler)
	Branch 4 (Aromatics 1 Plant)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 03/03/2023
RECEIVED DATE	: 04/03/2023	ANALYTICAL DATE	: 04/03/2023
REPORT DATE	: 13/03/2023	SAMPLE CONDITION	: Normal
STACK LOCATION	: 940-H1 (Boiler)	OPERATOR	: Mr. Pisanu Seenampeng
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Fuel gas

STACK DESCRIPTION

Height	: 30.00	m	Gas Velocity	: 6.5	m/s
Diameter	: 1.35	m	Flow rate ^{1/}	: 313	Ncu.m/min
Temperature	: 192.3	°C	Excess Oxygen	: 5.0	%
Moisture	: 12.4	%			

PARAMETER	UNIT	RESULT ^{1/}			STANDARD		REFERENCE
		5.0%O ₂	7%O ₂	g/s	7%O ₂	g/s	
Total Volatile Organic Compounds	ppm	1.90	1.65	0.018	-	-	US EPA Method 25A

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

ภาคผนวก ง.2

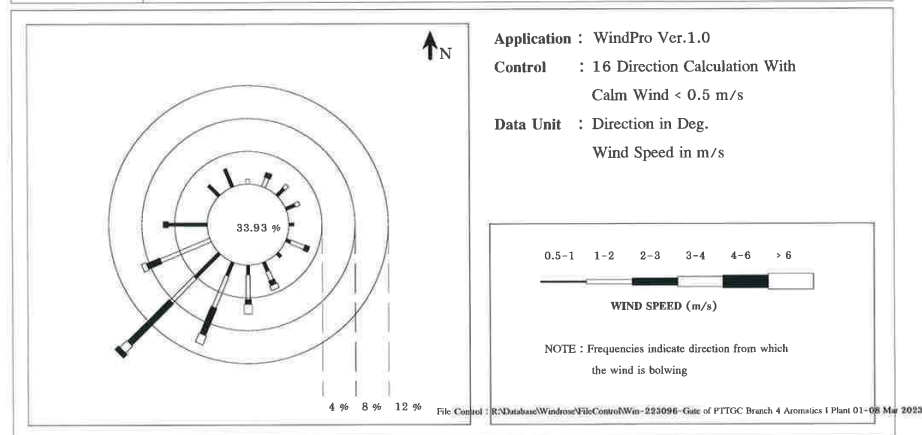
ใบรับรองผลการตรวจวัดคุณภาพอากาศในบรรยากาศ



Meteorological Monitoring Results : Wind Rose MTR-PTTGC4

Location : Gate of PTTGC Branch 4 Aromatics 1 Plant Monitor period : 01-08 Mar 2023
Wind Speed Model : NRG Symphonie Serial No : 1632
Wind Direction Model : NRG Symphonie Serial No : 1632

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	
N	0.0000	0.0060	0.0000	0.0000	0.0000	0.0000	0.0060
NNE	0.0000	0.0119	0.0060	0.0000	0.0000	0.0000	0.0179
NE	0.0119	0.0060	0.0000	0.0000	0.0000	0.0000	0.0179
ENE	0.0119	0.0060	0.0000	0.0000	0.0000	0.0000	0.0179
E	0.0060	0.0000	0.0000	0.0000	0.0000	0.0000	0.0060
ESE	0.0060	0.0179	0.0060	0.0000	0.0000	0.0000	0.0298
SE	0.0060	0.0000	0.0000	0.0000	0.0000	0.0000	0.0060
SSE	0.0119	0.0119	0.0060	0.0060	0.0000	0.0000	0.0357
S	0.0119	0.0298	0.0060	0.0119	0.0000	0.0000	0.0595
SSW	0.0179	0.0417	0.0357	0.0119	0.0000	0.0000	0.1071
SW	0.0417	0.0417	0.0714	0.0119	0.0060	0.0000	0.1726
WSW	0.0000	0.0655	0.0179	0.0060	0.0000	0.0000	0.0893
W	0.0476	0.0000	0.0060	0.0000	0.0000	0.0000	0.0536
WNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NW	0.0179	0.0000	0.0000	0.0000	0.0000	0.0000	0.0179
NNW	0.0238	0.0000	0.0000	0.0000	0.0000	0.0000	0.0238
CALM	0.3393						



Ladawan H.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

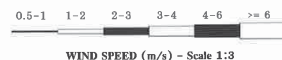


Meteorological Monitoring Results : Wind Rose MTR-PTTGC4

Location : Gate of PTTGC Branch 4 Aromatics 1 Plant Monitor period : 01-08 Mar 2023
Wind Speed Model : NRG Symphonie Serial No : 1632
Wind Direction Model : NRG Symphonie Serial No : 1632

Time	01-02 Mar 2023		02-03 Mar 2023		03-04 Mar 2023		04-05 Mar 2023	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
09:00 - 10:00	2.1	NNE	1.5	ESE	1.1	ESE	2.2	WSW
10:00 - 11:00	2.0	SW	1.4	WSW	0.8	W	2.3	SSW
11:00 - 12:00	1.8	WSW	1.9	WSW	0.6	SSW	2.2	SW
12:00 - 13:00	2.5	W	2.6	SSE	0.8	S	3.8	SW
13:00 - 14:00	2.4	SW	2.5	SW	0.9	S	4.2	SW
14:00 - 15:00	2.2	SSW	2.1	SW	0.9	SSE	3.5	S
15:00 - 16:00	1.7	S	2.0	SSW	2.2	WSW	2.5	SW
16:00 - 17:00	1.8	SSW	1.8	SSW	2.2	SSW	1.5	S
17:00 - 18:00	0.9	SW	1.1	SSW	1.4	SW	0.8	SW
18:00 - 19:00	0.4	SSW	0.4	SW	0.8	SSW	0.2	NW
19:00 - 20:00	0.2	WNW	0.5	W	0.3	SW	0.2	S
20:00 - 21:00	0.1	ENE	0.2	W	0.2	W	0.3	W
21:00 - 22:00	0.3	NE	0.2	NW	0.3	WSW	0.2	W
22:00 - 23:00	0.4	ENE	0.5	NW	0.3	NW	0.4	WNW
23:00 - 24:00	0.5	NNW	0.3	WNW	0.3	NW	0.5	NNW
00:00 - 01:00	0.2	E	0.5	W	0.7	SSE	0.6	NNW
01:00 - 02:00	0.3	E	0.3	NW	0.4	SE	1.0	S
02:00 - 03:00	0.3	ENE	0.5	ENE	0.5	SE	1.0	WSW
03:00 - 04:00	0.2	ESE	0.7	W	0.2	SE	1.0	WSW
04:00 - 05:00	0.2	NE	0.9	SW	0.4	E	0.8	W
05:00 - 06:00	0.3	NNE	1.0	NNE	1.2	NNE	0.9	SW
06:00 - 07:00	0.4	NNW	1.1	SW	1.1	NE	1.3	SW
07:00 - 08:00	0.6	NE	1.3	WSW	1.5	ENE	1.6	SW
08:00 - 09:00	1.0	ESE	1.6	N	2.1	SW	2.2	WSW

Wind Rose



Ladawan H.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-PTTGC4

Location : Gate of PTTGC Branch 4 Aromatics I Plant Monitor period : 01-08 Mar 2023
Wind Speed Model : NRG Symphonie Serial No : 1632
Wind Direction Model : NRG Symphonie Serial No : 1632

Time	05-06 Mar 2023		06-07 Mar 2023		07-08 Mar 2023		
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	
09:00 - 10:00	2.9	SSW	1.9	SSW	0.6	ESE	
10:00 - 11:00	2.5	SW	2.3	S	1.0	S	
11:00 - 12:00	1.9	SSE	2.3	ESE	1.8	SSW	
12:00 - 13:00	3.4	WSW	1.9	SSE	3.0	SSW	
13:00 - 14:00	3.8	SSE	3.1	SSW	2.6	SW	
14:00 - 15:00	3.5	SW	3.0	S	2.3	SW	
15:00 - 16:00	2.7	SW	2.0	SSW	2.0	SW	
16:00 - 17:00	1.7	SW	1.4	SSW	1.8	WSW	
17:00 - 18:00	1.0	S	0.9	SW	1.6	SW	
18:00 - 19:00	0.6	SSW	0.3	WSW	1.0	WSW	
19:00 - 20:00	0.3	SSE	0.1	SSE	1.1	SSW	
20:00 - 21:00	0.3	WSW	0.3	W	0.3	SSE	
21:00 - 22:00	0.2	NW	0.4	SW	0.5	SW	
22:00 - 23:00	0.3	NE	0.2	W	0.4	ENE	
23:00 - 24:00	0.5	NNW	0.5	NW	0.3	SW	
00:00 - 01:00	0.3	NNW	0.2	E	0.1	WSW	
01:00 - 02:00	0.3	W	0.2	E	0.2	SW	
02:00 - 03:00	0.2	NE	0.4	NNW	0.2	SW	
03:00 - 04:00	0.3	NNE	0.4	E	0.2	W	
04:00 - 05:00	0.3	SE	0.5	E	0.2	NNE	
05:00 - 06:00	0.5	ENE	0.2	NE	0.7	NE	
06:00 - 07:00	1.1	SW	0.6	NW	1.0	WSW	
07:00 - 08:00	1.3	WSW	0.9	W	0.8	W	
08:00 - 09:00	1.6	WSW	0.5	SW	0.6	W	

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-223096-Gate of PTTGC Branch 4 Aromatics I Plant 01-08 Mar 2023

Ladawan N.
(Miss Ladawan Wongcharoen)
Environmental Scientist

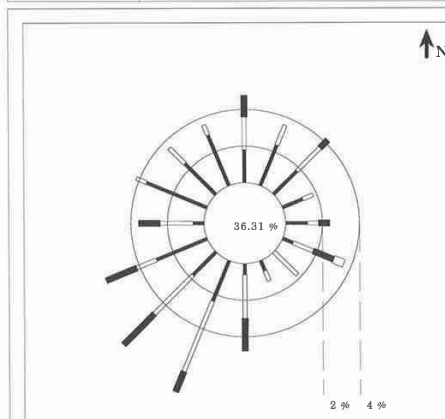
Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-PTTGC4

Location : Chaklukya Community Monitor period : 01-08 Mar 2023
Wind Speed Model : NRG Symphonie Serial No : 10695
Wind Direction Model : NRG Symphonie Serial No : 10695

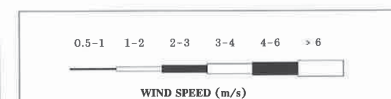
Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	Total
N	0.0179	0.0179	0.0119	0.0000	0.0000	0.0000	0.0476
NNE	0.0238	0.0119	0.0000	0.0000	0.0000	0.0000	0.0357
NE	0.0179	0.0179	0.0060	0.0000	0.0000	0.0000	0.0417
ENE	0.0119	0.0060	0.0000	0.0000	0.0000	0.0000	0.0179
E	0.0119	0.0060	0.0060	0.0000	0.0000	0.0000	0.0238
ESE	0.0060	0.0119	0.0119	0.0060	0.0000	0.0000	0.0357
SE	0.0000	0.0179	0.0000	0.0000	0.0000	0.0000	0.0179
SSE	0.0060	0.0060	0.0000	0.0000	0.0000	0.0000	0.0119
S	0.0060	0.0238	0.0179	0.0000	0.0000	0.0000	0.0476
SSW	0.0238	0.0417	0.0119	0.0000	0.0000	0.0000	0.0774
SW	0.0179	0.0298	0.0238	0.0000	0.0000	0.0000	0.0714
WSW	0.0298	0.0119	0.0179	0.0000	0.0000	0.0000	0.0595
W	0.0060	0.0179	0.0119	0.0000	0.0000	0.0000	0.0357
WNW	0.0357	0.0060	0.0000	0.0000	0.0000	0.0000	0.0417
NW	0.0238	0.0119	0.0000	0.0000	0.0000	0.0000	0.0357
NNW	0.0298	0.0060	0.0000	0.0000	0.0000	0.0000	0.0357
CALM	0.3631						



Application : WindPro Ver.1.0

Control : 16 Direction Calculation With
Calm Wind < 0.5 m/s

Data Unit : Direction in Deg.
Wind Speed in m/s



NOTE : Frequencies indicate direction from which
the wind is blowing

File Control : R:\Database\Windrose\FileControl\Win-223096-Chaklukya Community 01-08 Mar 2023

Ladawan N.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



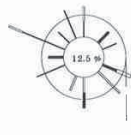
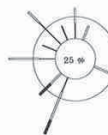
Meteorological Monitoring Results : Wind Rose

MTR-PTTGC4

Location : Chaklukya Community Monitor period : 01-08 Mar 2023
 Wind Speed Model : NRG Symphonie Serial No : 10695
 Wind Direction Model : NRG Symphonie Serial No : 10695

Time	01-02 Mar 2023		02-03 Mar 2023		03-04 Mar 2023		04-05 Mar 2023	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
09:00 - 10:00	1.9	NNE	1.0	ESE	0.8	SSE	1.7	S
10:00 - 11:00	1.9	W	1.6	W	0.4	NW	1.6	SE
11:00 - 12:00	1.8	NW	1.6	W	0.7	WSW	1.5	SE
12:00 - 13:00	1.5	NNW	2.3	SSW	1.1	SSW	2.6	ESE
13:00 - 14:00	2.2	SW	2.1	SW	2.1	SW	3.0	ESE
14:00 - 15:00	1.7	S	1.8	SSW	2.0	S	2.3	S
15:00 - 16:00	1.4	SSW	1.5	SW	2.1	WSW	2.1	W
16:00 - 17:00	1.4	SSW	1.4	SSW	1.8	S	1.2	SSW
17:00 - 18:00	0.6	WSW	0.7	SSW	1.0	SW	0.6	WSW
18:00 - 19:00	0.3	SSW	0.4	SW	0.6	SW	0.9	NW
19:00 - 20:00	0.4	W	0.5	NNW	0.3	SW	0.5	WSW
20:00 - 21:00	0.3	ENE	0.2	N	0.1	NNW	0.2	NNW
21:00 - 22:00	0.3	NE	0.3	NNW	0.3	WNW	0.3	N
22:00 - 23:00	0.3	ENE	0.4	NW	0.4	WNW	0.3	W
23:00 - 24:00	0.4	NNW	0.3	WNW	0.4	NW	0.5	NNW
00:00 - 01:00	0.4	NNE	0.4	NNW	0.6	E	0.5	NNW
01:00 - 02:00	0.3	ENE	0.5	NW	0.5	NE	0.9	ENE
02:00 - 03:00	0.4	ENE	0.7	N	0.5	E	0.7	WNW
03:00 - 04:00	0.4	NE	0.7	NW	0.4	ENE	0.6	WNW
04:00 - 05:00	0.3	ENE	0.8	WNW	0.8	N	0.7	N
05:00 - 06:00	0.2	NNE	1.0	NNE	0.8	NNE	0.8	WNW
06:00 - 07:00	0.4	NNW	0.9	W	0.8	NE	1.0	WNW
07:00 - 08:00	0.4	NE	1.2	NW	1.3	ENE	1.4	N
08:00 - 09:00	0.6	ESE	1.4	N	1.8	N	2.0	NE

Wind Rose



WIND SPEED (m/s) - Scale 1:3

File Control :R:\Database\Windrose\FileControl\Win-223096-Chaklukya Community 01-08 Mar 2023

Ladawan H.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist

Preeda S.
 (Miss Preeda Somjai)
 Technical Management Team



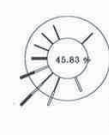
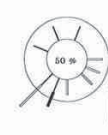
Meteorological Monitoring Results : Wind Rose

MTR-PTTGC4

Location : Chaklukya Community Monitor period : 01-08 Mar 2023
 Wind Speed Model : NRG Symphonie Serial No : 10695
 Wind Direction Model : NRG Symphonie Serial No : 10695

Time	05-06 Mar 2023		06-07 Mar 2023		07-08 Mar 2023	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
09:00 - 10:00	2.1	E	1.4	SE	0.4	E
10:00 - 11:00	2.0	N	1.8	E	1.2	SSE
11:00 - 12:00	1.5	NE	1.4	ESE	1.2	SSW
12:00 - 13:00	2.1	N	1.4	S	2.2	WSW
13:00 - 14:00	2.5	S	1.6	SW	2.4	W
14:00 - 15:00	2.5	ESE	2.1	SSW	2.1	SW
15:00 - 16:00	2.1	WSW	1.6	SW	1.5	SW
16:00 - 17:00	1.1	WSW	0.9	SSW	1.3	WSW
17:00 - 18:00	0.7	S	0.6	SW	0.8	SW
18:00 - 19:00	0.5	WSW	0.4	WSW	0.4	WSW
19:00 - 20:00	0.6	SSW	0.3	SSW	0.3	S
20:00 - 21:00	0.4	NW	0.3	NNW	0.5	SSW
21:00 - 22:00	0.2	NW	0.3	WNW	0.1	WNW
22:00 - 23:00	0.4	NE	0.3	NNW	0.3	E
23:00 - 24:00	0.4	NNW	0.3	NNW	0.3	WNW
00:00 - 01:00	0.3	N	0.2	N	0.3	NW
01:00 - 02:00	0.3	NNW	0.3	NE	0.3	WNW
02:00 - 03:00	0.4	NE	0.3	NNW	0.3	W
03:00 - 04:00	0.5	NNE	0.4	N	0.2	NNW
04:00 - 05:00	0.4	E	0.5	NNE	0.4	NNE
05:00 - 06:00	0.6	ENE	0.3	NE	0.5	NE
06:00 - 07:00	0.8	NNE	0.4	WNW	0.8	NW
07:00 - 08:00	1.2	NE	0.7	NNW	0.7	NNW
08:00 - 09:00	1.4	NE	0.6	WNW	0.5	WNW

Wind Rose



WIND SPEED (m/s) - Scale 1:3

File Control :R:\Database\Windrose\FileControl\Win-223096-Chaklukya Community 01-08 Mar 2023

Ladawan H.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist

Preeda S.
 (Miss Preeda Somjai)
 Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide MTR-PTTGC4

Location : Gate of PTTC Branch 4 Aromatics I Plant Monitor Period : 01-08 Mar 2023
Analyzer Model : API 200A Station No : SCT-16
Serial No : 1651 Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E Serial No : 587
Calibration Gas Cylinder I.D.: EB0108319
Certified Date : 09 Jan 2023 Cal Concentration (ppb) : 0,100,200,400
Expire Date : 08 Jan 2024

Time	NO2 Concentration (ppb)						
	01-02 Mar 2023	02-03 Mar 2023	03-04 Mar 2023	04-05 Mar 2023	05-06 Mar 2023	06-07 Mar 2023	07-08 Mar 2023
09:00 - 10:00	6.5	7.4	6.4	8.3	5.7	7.1	11.1
10:00 - 11:00	7.0	6.9	6.9	8.3	6.7	6.6	10.6
11:00 - 12:00	7.5	5.9	7.3	7.3	7.2	8.6	11.1
12:00 - 13:00	9.0	6.4	7.3	5.8	6.2	7.1	10.1
13:00 - 14:00	9.0	6.4	9.8	6.3	6.2	6.6	8.6
14:00 - 15:00	9.5	6.9	10.8	6.3	5.7	7.6	8.6
15:00 - 16:00	15.0	7.9	9.8	8.3	7.7	9.1	12.0
16:00 - 17:00	13.0	8.9	15.8	8.8	9.7	10.6	15.5
17:00 - 18:00	12.5	10.9	24.3	10.8	11.7	10.6	7.5
18:00 - 19:00	18.5	13.4	17.8	12.8	14.7	4.1	16.0
19:00 - 20:00	14.5	13.9	21.3	27.8	7.2	15.6	15.5
20:00 - 21:00	16.5	12.4	18.8	3.7	21.7	18.1	12.5
21:00 - 22:00	13.0	15.9	3.8	19.2	19.7	17.1	9.5
22:00 - 23:00	7.5	4.4	15.3	9.7	12.7	18.6	9.0
23:00 - 00:00	8.0	4.4	3.3	2.7	3.2	2.6	2.5
00:00 - 01:00	7.5	4.4	9.8	8.2	7.7	10.1	8.0
01:00 - 02:00	8.9	3.9	7.8	3.7	6.7	6.6	6.0
02:00 - 03:00	5.4	3.4	8.3	4.2	6.7	5.6	5.5
03:00 - 04:00	7.9	3.9	7.8	3.2	7.7	5.6	6.0
04:00 - 05:00	9.9	4.9	5.8	3.2	6.7	6.1	6.0
05:00 - 06:00	9.4	5.4	6.3	3.2	5.1	10.6	9.5
06:00 - 07:00	11.9	9.9	7.3	5.7	5.6	13.1	12.0
07:00 - 08:00	8.9	6.9	6.3	6.2	6.1	12.6	12.0
08:00 - 09:00	8.4	6.9	6.8	5.7	7.1	11.1	8.5
Average-24Hr*	10.2	7.6	10.2	7.9	8.6	9.6	9.7
Max-1Hr	18.5	15.9	24.3	27.8	21.7	18.6	16.0
Min-1Hr	5.4	3.4	3.3	2.7	3.2	2.6	2.5
Standard-1Hr	170 ppb(320 ug/cu.m)						
Standard-24Hr	-						

Remark : * Average time between 09:00-09:00

Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide MTR-PTTGC4

Location : Chaklukya Community Monitor Period : 01-08 Mar 2023
Analyzer Model : API 200A Station No : SCT-18
Serial No : 2385 Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E Serial No : 587
Calibration Gas Cylinder I.D.: EB0108319
Certified Date : 09 Jan 2023 Cal Concentration (ppb) : 0,100,200,400
Expire Date : 08 Jan 2024

Time	NO2 Concentration (ppb)						
	01-02 Mar 2023	02-03 Mar 2023	03-04 Mar 2023	04-05 Mar 2023	05-06 Mar 2023	06-07 Mar 2023	07-08 Mar 2023
09:00 - 10:00	5.0	4.9	4.8	4.6	3.5	4.4	7.3
10:00 - 11:00	5.5	4.9	4.8	5.1	4.0	4.4	6.8
11:00 - 12:00	5.5	4.4	4.2	4.6	4.5	4.9	6.3
12:00 - 13:00	6.5	3.9	4.7	4.1	4.0	4.9	4.8
13:00 - 14:00	5.5	4.4	5.2	3.6	3.5	3.9	5.8
14:00 - 15:00	5.5	4.4	5.7	3.6	3.5	3.9	4.3
15:00 - 16:00	8.5	4.8	6.2	5.1	3.0	4.4	4.7
16:00 - 17:00	6.0	5.8	6.2	4.6	3.5	4.4	7.7
17:00 - 18:00	7.0	6.3	7.7	4.6	4.5	6.4	9.2
18:00 - 19:00	11.0	6.8	7.2	5.1	9.5	6.9	10.2
19:00 - 20:00	7.4	6.8	7.7	5.1	8.0	5.8	8.7
20:00 - 21:00	3.9	4.8	7.2	4.1	5.5	4.8	7.7
21:00 - 22:00	6.4	3.3	6.2	4.1	7.0	5.3	5.7
22:00 - 23:00	4.9	3.3	3.7	3.6	6.0	5.3	4.2
23:00 - 00:00	5.4	3.3	3.7	3.1	3.9	3.8	3.2
00:00 - 01:00	4.9	2.8	3.7	3.1	2.9	3.3	3.7
01:00 - 02:00	3.4	2.8	2.7	2.6	2.9	4.3	3.7
02:00 - 03:00	3.4	2.8	3.2	2.6	2.9	4.3	5.2
03:00 - 04:00	3.9	3.3	3.7	2.5	3.4	4.8	4.2
04:00 - 05:00	4.4	3.8	3.2	2.5	3.9	4.8	3.7
05:00 - 06:00	4.9	4.3	4.2	3.0	3.9	4.8	4.2
06:00 - 07:00	8.9	8.3	5.7	4.5	4.9	6.3	6.2
07:00 - 08:00	6.4	5.3	4.1	4.5	3.9	5.8	6.7
08:00 - 09:00	6.4	4.8	4.1	4.0	4.4	6.3	6.2
Average-24Hr*	5.9	4.6	5.0	3.9	4.5	4.9	5.8
Max-1Hr	11.0	8.3	7.7	5.1	9.5	6.9	10.2
Min-1Hr	3.4	2.8	2.7	2.5	2.9	3.3	3.2
Standard-1Hr	170 ppb(320 ug/cu.m)						
Standard-24Hr	-						

Remark : * Average time between 08:00-09:00

Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Sulfur dioxide MTR-PTTGC4

Location : Gate of PTTGC Branch 4 Aromatics I Plant Monitor Period : 01-08 Mar 2023
Analyzer Model : API 100A Station No : SCT-16
Serial No : 382 Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E Serial No : 587
Calibration Gas Cylinder I.D.: EB0108319
Certified Date : 09 Jan 2023 Cal Concentration (ppb) : 0,100,200,400
Expire Date : 08 Jan 2024

Time	SO2 Concentration (ppb)						
	01-02 Mar 2023	02-03 Mar 2023	03-04 Mar 2023	04-05 Mar 2023	05-06 Mar 2023	06-07 Mar 2023	07-08 Mar 2023
09:00 - 10:00	3.5	3.5	3.0	3.4	2.9	2.9	4.9
10:00 - 11:00	3.5	3.0	3.5	3.4	2.9	2.9	3.9
11:00 - 12:00	3.0	3.5	3.4	3.4	2.9	2.9	3.9
12:00 - 13:00	3.0	3.5	3.4	3.4	2.9	2.9	3.4
13:00 - 14:00	3.0	3.0	3.4	2.9	2.9	2.9	2.9
14:00 - 15:00	3.0	3.0	3.4	2.9	3.4	2.9	3.9
15:00 - 16:00	3.0	3.0	3.4	2.9	3.4	2.9	4.8
16:00 - 17:00	5.0	4.0	4.4	2.9	3.9	2.9	3.3
17:00 - 18:00	7.0	3.0	10.9	3.4	3.4	2.9	2.8
18:00 - 19:00	6.5	3.0	10.4	3.9	3.4	2.9	2.8
19:00 - 20:00	5.5	3.0	7.4	3.9	3.9	2.9	2.8
20:00 - 21:00	4.5	3.5	3.9	6.4	3.4	3.4	3.3
21:00 - 22:00	4.5	3.5	3.4	4.4	3.4	2.9	3.3
22:00 - 23:00	4.5	3.0	3.4	3.9	3.4	2.9	3.3
23:00 - 00:00	5.0	3.0	3.4	3.4	2.9	2.9	2.8
00:00 - 01:00	4.0	3.0	3.4	2.9	2.9	2.9	2.8
01:00 - 02:00	3.5	3.0	2.9	2.9	2.9	2.9	3.8
02:00 - 03:00	3.5	3.5	3.9	2.9	2.9	2.9	3.3
03:00 - 04:00	3.5	3.5	4.4	3.4	2.9	2.9	3.3
04:00 - 05:00	3.5	3.5	3.9	3.4	2.9	3.4	2.8
05:00 - 06:00	4.0	3.5	4.4	2.9	3.4	2.9	2.8
06:00 - 07:00	4.0	3.5	3.9	3.4	2.9	3.9	3.3
07:00 - 08:00	4.0	3.5	4.4	2.9	3.9	4.4	3.3
08:00 - 09:00	3.5	3.5	2.9	2.9	3.9	6.4	5.3
Average-24Hr*	4.1	3.3	4.4	3.4	3.2	3.2	3.5
Max-1Hr	7.0	4.0	10.9	6.4	3.9	6.4	5.3
Min-1Hr	3.0	3.0	2.9	2.9	2.9	2.9	2.8
Standard-1Hr	300 ppb(780 ug/cu.m)						
Standard-24Hr	120 ppb(300 ug/cu.m)						

Remark : * Average time between 09:00-09:00

Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Sulfur dioxide MTR-PTTGC4

Location : Chaklukya Community Monitor Period : 01-08 Mar 2023
Analyzer Model : Teledyne T100 Station No : SCT-18
Serial No : 119 Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E Serial No : 587
Calibration Gas Cylinder I.D.: EB0108319
Certified Date : 09 Jan 2023 Cal Concentration (ppb) : 0,100,200,400
Expire Date : 08 Jan 2024

Time	SO2 Concentration (ppb)						
	01-02 Mar 2023	02-03 Mar 2023	03-04 Mar 2023	04-05 Mar 2023	05-06 Mar 2023	06-07 Mar 2023	07-08 Mar 2023
09:00 - 10:00	4.0	2.9	2.7	2.6	2.5	2.4	3.7
10:00 - 11:00	3.5	2.9	2.7	2.6	2.5	2.4	3.2
11:00 - 12:00	3.0	2.9	2.7	2.6	2.5	2.4	4.2
12:00 - 13:00	4.5	4.4	4.2	3.1	3.0	2.9	5.2
13:00 - 14:00	4.5	5.8	4.7	3.1	3.0	3.4	5.7
14:00 - 15:00	5.0	3.8	3.7	3.1	4.0	5.8	4.2
15:00 - 16:00	5.0	3.3	3.2	5.6	6.5	3.8	3.7
16:00 - 17:00	5.0	3.8	3.2	6.1	4.5	3.8	3.2
17:00 - 18:00	4.0	2.8	3.7	4.6	4.0	3.8	3.7
18:00 - 19:00	3.9	2.8	3.2	3.6	3.4	2.8	3.2
19:00 - 20:00	4.9	2.8	4.7	3.6	2.9	2.8	3.2
20:00 - 21:00	4.9	3.3	3.2	3.6	2.9	3.8	3.2
21:00 - 22:00	5.4	3.3	3.2	3.6	2.9	2.8	2.7
22:00 - 23:00	5.4	2.8	3.2	3.6	2.9	2.3	3.2
23:00 - 00:00	4.4	2.8	2.7	3.0	2.4	2.3	2.2
00:00 - 01:00	3.9	2.8	2.7	2.5	2.4	2.3	2.2
01:00 - 02:00	3.9	2.8	2.7	4.0	2.4	2.3	2.7
02:00 - 03:00	3.4	2.8	3.7	4.5	2.9	2.3	2.2
03:00 - 04:00	2.9	2.8	4.2	3.5	2.9	2.3	2.2
04:00 - 05:00	3.4	2.8	3.6	3.0	2.9	2.8	2.1
05:00 - 06:00	4.4	2.8	3.6	3.5	2.9	2.8	2.1
06:00 - 07:00	4.4	2.8	3.1	4.0	2.9	3.3	4.1
07:00 - 08:00	3.9	2.8	3.6	3.0	3.9	3.3	4.6
08:00 - 09:00	4.4	2.8	2.6	3.0	3.4	4.3	4.6
Average-24Hr*	4.3	3.2	3.4	3.6	3.2	3.1	3.4
Max-1Hr	5.4	5.8	4.7	6.1	6.5	5.8	5.7
Min-1Hr	2.9	2.8	2.6	2.5	2.4	2.3	2.1
Standard-1Hr	300 ppb(780 ug/cu.m)						
Standard-24Hr	120 ppb(300 ug/cu.m)						

Remark : * Average time between 09:00-09:00

Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REQUEST SERVICE No. : 0030/66
(Branch 4 : Aromatics 1 Plant) SAMPLING METHOD : Subatmospheric Pressure Sampling
SAMPLING BY : SECOT Co., Ltd. ANALYTICAL DATE : 11/01/2023
SAMPLING DATE : 05-06/01/2023 SAMPLE CONDITION : Normal
SAMPLING TIME : 14:32-13:37 FILE CODE : 223096_TO-15_January
RECEIVED DATE : 07/01/2023
REPORT DATE : 13/01/2023

Compound	Non Detection		SAMPLING LOCATION		STANDARD ($\mu\text{g}/\text{m}^3$)
			Branch 4 : North		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	4.32	13.80	-
Cyclohexane	0.02	0.07	2.35	8.09	-
Toluene	0.02	0.08	1.09	4.11	-
m,p-xylene	0.04	0.17	0.53	2.30	-
o-xylene	0.02	0.09	0.16	0.69	-
Total xylene	0.06	0.26	0.69	2.99	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

Analyst

~R~

(Mrs. Araya Tipparuk)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REQUEST SERVICE No. : 0030/66
(Branch 4 : Aromatics 1 Plant) SAMPLING METHOD : Subatmospheric Pressure Sampling
SAMPLING BY : SECOT Co., Ltd. ANALYTICAL DATE : 11/01/2023
SAMPLING DATE : 05-06/01/2023 SAMPLE CONDITION : Normal
SAMPLING TIME : 14:15-14:23 FILE CODE : 223096_TO-15_January
RECEIVED DATE : 07/01/2023
REPORT DATE : 13/01/2023

Compound	Non Detection		SAMPLING LOCATION		STANDARD ($\mu\text{g}/\text{m}^3$)
			Branch 4 : South		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	1.31	4.18	-
Cyclohexane	0.02	0.07	1.26	4.34	-
Toluene	0.02	0.08	0.75	2.83	-
m,p-xylene	0.04	0.17	0.65	2.82	-
o-xylene	0.02	0.09	0.16	0.69	-
Total xylene	0.06	0.26	0.81	3.51	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

Analyst

~R~

(Mrs. Araya Tipparuk)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0030/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 11/01/2023
SAMPLING DATE	: 05-06/01/2023	SAMPLE CONDITION	: Normal
SAMPLING TIME	: 16:25-15:30	FILE CODE	: 223096_TO-15_January
RECEIVED DATE	: 07/01/2023		
REPORT DATE	: 13/01/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD ($\mu\text{g}/\text{m}^3$)
			Branch 8 : North		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	0.89	2.84	-
Cyclohexane	0.02	0.07	0.17	0.59	-
Toluene	0.02	0.08	0.81	3.05	-
m,p-xylene	0.04	0.17	0.41	1.78	-
o-xylene	0.02	0.09	0.10	0.43	-
Total xylene	0.06	0.26	0.51	2.21	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

Analyst

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(Mrs. Araya Tipparak)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0030/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 11/01/2023
SAMPLING DATE	: 05-06/01/2023	SAMPLE CONDITION	: Normal
SAMPLING TIME	: 16:30-15:40	FILE CODE	: 223096_TO-15_January
RECEIVED DATE	: 07/01/2023		
REPORT DATE	: 13/01/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD (µg/m ³)
			Branch 8 : South		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	4.35	13.90	-
Cyclohexane	0.02	0.07	3.71	12.78	-
Toluene	0.02	0.08	2.27	8.55	-
m,p-xylene	0.04	0.17	3.79	16.46	-
o-xylene	0.02	0.09	1.09	4.73	-
Total xylene	0.06	0.26	4.88	21.19	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Siriwan Chimsa-nga
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Analyst

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(Mrs. Araya Tipparak)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REQUEST SERVICE No. : 0163/66
(Branch 4 : Aromatics 1 Plant) SAMPLING METHOD : Subatmospheric Pressure Sampling
SAMPLING BY : SECOT Co., Ltd. ANALYTICAL DATE : 08/02/2023
SAMPLING DATE : 02-03/02/2023 SAMPLE CONDITION : Normal
SAMPLING TIME : 09:23-09:20 FILE CODE : 223096_TO-15_February
RECEIVED DATE : 04/02/2023
REPORT DATE : 10/02/2023

Compound	Non Detection		SAMPLING LOCATION		STANDARD ($\mu\text{g}/\text{m}^3$)
			Branch 4 : North		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	1.14	3.64	-
Cyclohexane	0.02	0.07	5.14	17.70	-
Toluene	0.02	0.08	2.16	8.14	-
m,p-xylene	0.04	0.17	0.35	1.52	-
o-xylene	0.02	0.09	0.10	0.43	-
Total xylene	0.06	0.26	0.45	1.95	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

Analyst

M.T.

(Mrs. Araya Tipparak)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REQUEST SERVICE No. : 0163/66
(Branch 4 : Aromatics 1 Plant) SAMPLING METHOD : Subatmospheric Pressure Sampling
SAMPLING BY : SECOT Co., Ltd. ANALYTICAL DATE : 08/02/2023
SAMPLING DATE : 02-03/02/2023 SAMPLE CONDITION : Normal
SAMPLING TIME : 10:00-10:08 FILE CODE : 223096_TO-15_February
RECEIVED DATE : 04/02/2023
REPORT DATE : 10/02/2023

Compound	Non Detection		SAMPLING LOCATION		STANDARD (µg/m ³)
			Branch 4 : South		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	0.76	2.43	-
Cyclohexane	0.02	0.07	0.44	1.52	-
Toluene	0.02	0.08	0.26	0.98	-
m,p-xylene	0.04	0.17	0.90	3.91	-
o-xylene	0.02	0.09	0.39	1.69	-
Total xylene	0.06	0.26	1.29	5.60	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

Analyst

M.T.

(Mrs. Araya Tipparak)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0163/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 08/02/2023
SAMPLING DATE	: 02-03/02/2023	SAMPLE CONDITION	: Normal
SAMPLING TIME	: 10:56-10:53	FILE CODE	: 223096_TO-15_February
RECEIVED DATE	: 04/02/2023		
REPORT DATE	: 10/02/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD ($\mu\text{g}/\text{m}^3$)
			Branch 8 : North		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	3.05	9.74	-
Cyclohexane	0.02	0.07	7.54	25.97	-
Toluene	0.02	0.08	1.26	4.75	-
m,p-xylene	0.04	0.17	3.43	14.90	-
o-xylene	0.02	0.09	1.42	6.17	-
Total xylene	0.06	0.26	4.85	21.07	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

Analyst

~ TL
(Mrs. Araya Tipparuk)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0163/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 08/02/2023
SAMPLING DATE	: 02-03/02/2023	SAMPLE CONDITION	: Normal
SAMPLING TIME	: 11:00-11:00	FILE CODE	: 223096_TO-15_February
RECEIVED DATE	: 04/02/2023		
REPORT DATE	: 10/02/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD (µg/m ³)
			Branch 8 : South		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	1.38	4.41	-
Cyclohexane	0.02	0.07	3.25	11.19	-
Toluene	0.02	0.08	0.75	2.83	-
m,p-xylene	0.04	0.17	0.55	2.39	-
o-xylene	0.02	0.09	0.21	0.91	-
Total xylene	0.06	0.26	0.76	3.30	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

Analyst

~ TL
(Mrs. Araya Tipparuk)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0349/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 09-10/03/2023
SAMPLING DATE	: 02-03/03/2023	SAMPLE CONDITION	: Normal
SAMPLING TIME	: 13:51-14:05	FILE CODE	: 223096_TO-15_March
RECEIVED DATE	: 04/03/2023		
REPORT DATE	: 14/03/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD ($\mu\text{g}/\text{m}^3$)
			Branch 4 : North		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	1.44	4.60	-
Cyclohexane	0.02	0.07	3.84	13.22	-
Toluene	0.02	0.08	2.44	9.19	-
m,p-xylene	0.04	0.17	0.55	2.39	-
o-xylene	0.02	0.09	0.27	1.17	-
Total xylene	0.06	0.26	0.82	3.56	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

~ R

(Mrs. Araya Tipparuk)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0349/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 09-10/03/2023
SAMPLING DATE	: 02-03/03/2023	SAMPLE CONDITION	: Normal
SAMPLING TIME	: 14:06-14:20	FILE CODE	: 223096_TO-15_March
RECEIVED DATE	: 04/03/2023		
REPORT DATE	: 14/03/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD (µg/m ³)
			Branch 4 : South		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	0.95	3.03	
Cyclohexane	0.02	0.07	2.96	10.19	
Toluene	0.02	0.08	1.52	5.73	
m,p-xylene	0.04	0.17	0.27	1.17	
o-xylene	0.02	0.09	0.12	0.52	
Total xylene	0.06	0.26	0.39	1.69	

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

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Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0349/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 09-10/03/2023
SAMPLING DATE	: 02-03/03/2023	SAMPLE CONDITION	: Normal
SAMPLING TIME	: 14:49-14:55	FILE CODE	: 223096_TO-15_March
RECEIVED DATE	: 04/03/2023		
REPORT DATE	: 14/03/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD ($\mu\text{g}/\text{m}^3$)
			Branch 8 : North		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	1.65	5.27	-
Cyclohexane	0.02	0.07	6.71	23.11	-
Toluene	0.02	0.08	2.20	8.29	-
m,p-xylene	0.04	0.17	0.41	1.78	-
o-xylene	0.02	0.09	0.23	1.00	-
Total xylene	0.06	0.26	0.64	2.78	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

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Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0349/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 09-10/03/2023
SAMPLING DATE	: 02-03/03/2023	SAMPLE CONDITION	: Normal
SAMPLING TIME	: 15:00-15:04	FILE CODE	: 223096_TO-15_March
RECEIVED DATE	: 04/03/2023		
REPORT DATE	: 14/03/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD (µg/m ³)
			Branch 8 : South		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	2.48	7.92	
Cyclohexane	0.02	0.07	5.04	17.36	
Toluene	0.02	0.08	2.53	9.53	
m,p-xylene	0.04	0.17	0.80	3.47	
o-xylene	0.02	0.09	0.56	2.43	
Total xylene	0.06	0.26	1.36	5.90	

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

M R

(Mrs. Araya Tipparuk)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0526/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 07/04/2023
SAMPLING DATE	: 03-04/04/2023	SAMPLE CONDITION	: Normal
SAMPLING TIME	: 09:18-09:41	FILE CODE	: 223096_TO-15_April
RECEIVED DATE	: 05/04/2023		
REPORT DATE	: 12/04/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD ($\mu\text{g}/\text{m}^3$)
			Branch 4 : North		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	0.59	1.88	-
Cyclohexane	0.02	0.07	1.46	5.03	-
Toluene	0.02	0.08	1.39	5.24	-
m,p-xylene	0.04	0.17	0.18	0.78	-
o-xylene	0.02	0.09	0.06	0.26	-
Total xylene	0.06	0.26	0.24	1.04	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0526/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 07/04/2023
SAMPLING DATE	: 03-04/04/2023	SAMPLE CONDITION	: Normal
SAMPLING TIME	: 09:46-09:58	FILE CODE	: 223096_TO-15_April
RECEIVED DATE	: 05/04/2023		
REPORT DATE	: 12/04/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD ($\mu\text{g}/\text{m}^3$)
			Branch 4 : South		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	0.11	0.35	-
Cyclohexane	0.02	0.07	0.44	1.52	-
Toluene	0.02	0.08	0.17	0.64	-
m,p-xylene	0.04	0.17	0.04	0.17	-
o-xylene	0.02	0.09	0.02	0.09	-
Total xylene	0.06	0.26	0.06	0.26	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Jutarat Jaemruen

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0526/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 07/04/2023
SAMPLING DATE	: 03-04/04/2023	SAMPLE CONDITION	: Normal
SAMPLING TIME	: 10:18-10:25	FILE CODE	: 223096_TO-15_April
RECEIVED DATE	: 05/04/2023		
REPORT DATE	: 12/04/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD (µg/m ³)
			Branch 8 : North		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	1.36	4.34	-
Cyclohexane	0.02	0.07	1.44	4.96	-
Toluene	0.02	0.08	1.39	5.24	-
m,p-xylene	0.04	0.17	0.86	3.74	-
o-xylene	0.02	0.09	0.54	2.35	-
Total xylene	0.06	0.26	1.40	6.09	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0526/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 07/04/2023
SAMPLING DATE	: 03-04/04/2023	SAMPLE CONDITION	: Normal
SAMPLING TIME	: 10:26-10:31	FILE CODE	: 223096_TO-15_April
RECEIVED DATE	: 05/04/2023		
REPORT DATE	: 12/04/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD (µg/m ³)
			Branch 8 : South		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	0.59	1.88	-
Cyclohexane	0.02	0.07	0.44	1.52	-
Toluene	0.02	0.08	0.41	1.54	-
m,p-xylene	0.04	0.17	0.61	2.65	-
o-xylene	0.02	0.09	0.12	0.52	-
Total xylene	0.06	0.26	0.73	3.17	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Jutarat Jaemruen

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REQUEST SERVICE No. : 0678/66
(Branch 4 : Aromatics 1 Plant) SAMPLING METHOD : Subatmospheric Pressure Sampling
SAMPLING BY : SECOT Co., Ltd. ANALYTICAL DATE : 09-10/05/2023
SAMPLING DATE : 02-03/05/2023 SAMPLE CONDITION : Normal
SAMPLING TIME : 09:47-10:15 FILE CODE : 223096_TO-15_May
RECEIVED DATE : 04/05/2023
REPORT DATE : 11/05/2023

Compound	Non Detection		SAMPLING LOCATION		STANDARD (µg/m ³)
			Branch 4 : North		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	0.41	1.31	-
Cyclohexane	0.02	0.07	4.38	15.08	-
Toluene	0.02	0.08	1.61	6.06	-
m,p-xylene	0.04	0.17	0.32	1.39	-
o-xylene	0.02	0.09	0.06	0.26	-
Total xylene	0.06	0.26	0.38	1.65	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

Analyst

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(Mrs. Araya Tipparuk)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REQUEST SERVICE No. : 0678/66
(Branch 4 : Aromatics 1 Plant) SAMPLING METHOD : Subatmospheric Pressure Sampling
SAMPLING BY : SECOT Co., Ltd. ANALYTICAL DATE : 09-10/05/2023
SAMPLING DATE : 02-03/05/2023 SAMPLE CONDITION : Normal
SAMPLING TIME : 09:30-10:00 FILE CODE : 223096_TO-15_May
RECEIVED DATE : 04/05/2023
REPORT DATE : 11/05/2023

Compound	Non Detection		SAMPLING LOCATION		STANDARD (µg/m ³)
			Branch 4 : South		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	0.15	0.48	☞
Cyclohexane	0.02	0.07	0.24	0.83	☞
Toluene	0.02	0.08	0.24	0.90	☞
m,p-xylene	0.04	0.17	0.08	0.35	☞
o-xylene	0.02	0.09	0.02	0.09	☞
Total xylene	0.06	0.26	0.10	0.44	

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

Analyst

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(Mrs. Araya Tipparuk)

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0678/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 09-10/05/2023
SAMPLING DATE	: 02-03/05/2023	SAMPLE CONDITION	: Normal
SAMPLING TIME	: 11:18-10:48	FILE CODE	: 223096_TO-15_May
RECEIVED DATE	: 04/05/2023		
REPORT DATE	: 11/05/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD (µg/m ³)
			Branch 8 : North		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	1.58	5.05	-
Cyclohexane	0.02	0.07	3.67	12.64	-
Toluene	0.02	0.08	1.79	6.74	-
m,p-xylene	0.04	0.17	0.82	3.56	-
o-xylene	0.02	0.09	0.38	1.65	-
Total xylene	0.06	0.26	1.20	5.21	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

Analyst

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(Mrs. Araya Tipparuk)

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0678/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 09-10/05/2023
SAMPLING DATE	: 02-03/05/2023	SAMPLE CONDITION	: Normal
SAMPLING TIME	: 11:30-10:58	FILE CODE	: 223096_TO-15_May
RECEIVED DATE	: 04/05/2023		
REPORT DATE	: 11/05/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD ($\mu\text{g}/\text{m}^3$)
			Branch 8 : South		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	0.80	2.56	-
Cyclohexane	0.02	0.07	3.10	10.68	-
Toluene	0.02	0.08	1.16	4.37	-
m,p-xylene	0.04	0.17	2.25	9.77	-
o-xylene	0.02	0.09	0.15	0.65	-
Total xylene	0.06	0.26	2.40	10.42	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

Analyst

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd. (Branch 4 : Aromatics 1 Plant)	REQUEST SERVICE No.	: 0887/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 01-02/06/2023	ANALYTICAL DATE	: 08/06/2023
SAMPLING TIME	: 10:26-10:05	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 03/06/2023	FILE CODE	: 223096_TO-15_June
REPORT DATE	: 09/06/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD ($\mu\text{g}/\text{m}^3$)
			Branch 4 : North		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	0.24	0.77	-
Cyclohexane	0.02	0.07	15.88	54.69	-
Toluene	0.02	0.08	1.72	6.48	-
m,p-xylene	0.04	0.17	0.13	0.56	-
o-xylene	0.02	0.09	0.04	0.17	-
Total xylene	0.06	0.26	0.17	0.73	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Sirivan Chimsa-nga
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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd. (Branch 4 : Aromatics 1 Plant)	REQUEST SERVICE No.	: 0887/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 01-02/06/2023	ANALYTICAL DATE	: 08/06/2023
SAMPLING TIME	: 10:15-10:12	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 03/06/2023	FILE CODE	: 223096_TO-15_June
REPORT DATE	: 09/06/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD (µg/m ³)
			Branch 4 : South		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	0.19	0.61	-
Cyclohexane	0.02	0.07	0.15	0.52	-
Toluene	0.02	0.08	0.22	0.83	-
m,p-xylene	0.04	0.17	0.08	0.35	-
o-xylene	0.02	0.09	0.02	0.09	-
Total xylene	0.06	0.26	0.10	0.44	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Sirivan Chimsa-nga
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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd. (Branch 4 : Aromatics 1 Plant)	REQUEST SERVICE No.	: 0887/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 01-02/06/2023	ANALYTICAL DATE	: 08/06/2023
SAMPLING TIME	: 10:54-10:42	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 03/06/2023	FILE CODE	: 223096_TO-15_June
REPORT DATE	: 09/06/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD ($\mu\text{g}/\text{m}^3$)
			Branch 8 : North		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	5.21	16.64	-
Cyclohexane	0.02	0.07	4.00	13.78	-
Toluene	0.02	0.08	2.07	7.80	-
m,p-xylene	0.04	0.17	0.19	0.83	-
o-xylene	0.02	0.09	0.21	0.91	-
Total xylene	0.06	0.26	0.40	1.74	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

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SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 01-02/06/2023	ANALYTICAL DATE	: 08/06/2023
SAMPLING TIME	: 11:00-10:33	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 03/06/2023	FILE CODE	: 223096_TO-15_June
REPORT DATE	: 09/06/2023		

Compound	Non Detection		SAMPLING LOCATION		STANDARD (µg/m ³)
			Branch 8 : South		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	0.15	0.48	-
Cyclohexane	0.02	0.07	12.06	41.53	-
Toluene	0.02	0.08	3.20	12.05	-
m,p-xylene	0.04	0.17	0.15	0.65	-
o-xylene	0.02	0.09	0.04	0.17	-
Total xylene	0.06	0.26	0.19	0.82	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd : EPA Methods TO-15,1999

Sirivan Chimsa-nga
(Miss Sirivan Chimsa-nga)

Analyst

MT
(Mrs. Araya Tipparuk)

Technical Management Team

Remark : 1. Reported analysis refers to submitted sample only.
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3. - Not available.

ภาคผนวก ง.3

ใบรับรองผลการตรวจวัดคุณภาพน้ำ



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0006/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 10.37
SAMPLING DATE	: 04/01/2023	ANALYTICAL DATE	: 05-12/01/2023
RECEIVED DATE	: 05/01/2023	SITE OPERATOR	: Mr. Watcharakan Pramakhate
REPORT DATE	: 12/01/2023	FILE CODE	: 223096_WW_January
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD
				Equalization Tank	
pH	-	4500-H ⁺ B	< 0.10	7.54	-
Color	ADMI	2120 F	< 6.0	26.8	-
Total Suspended Solids	mg/l	2540 D	< 5	13	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 0.50	ND	-
BOD ₅	mg/l	5210 B	< 1.0	31.0	-
COD	mg/l	5220 C	< 15.00	80.16	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0015	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0006/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 10.30
SAMPLING DATE	: 04/01/2023	ANALYTICAL DATE	: 05-12/01/2023
RECEIVED DATE	: 05/01/2023	SITE OPERATOR	: Mr. Watcharakan Pramakhate
REPORT DATE	: 12/01/2023	FILE CODE	: 223096_WW_January
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Effluent from Final Effluent Basin	
pH	-	4500-H ⁺ B	< 0.10	7.86	5.5-9.0
Color	ADMI	2120 F	< 6.0	17.4	≤ 300
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 0.50	ND	≤ 5
BOD ₅	mg/l	5210 B	< 1.0	2.1	≤ 20
COD	mg/l	5220 C	< 15.00	20.04	≤ 120
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

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 4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0006/66
	: (Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 10.50
SAMPLING DATE	: 04/01/2023	ANALYTICAL DATE	: 05-12/01/2023
RECEIVED DATE	: 05/01/2023	SITE OPERATOR	: Mr. Watcharakan Pramakhate
REPORT DATE	: 12/01/2023	FILE CODE	: 223096_WW_January
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Effluent from 940-XC1	
pH		4500-H ⁺ B	< 0.10	8.09	5.5-9.0
Color	ADMI	2120 F	< 6.0	17.7	≤ 300
Total Dissolved Solids	mg/l	2540 C	< 50	1,346	≤ 30,340 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	1.0	≤ 20
COD	mg/l	5220 C	< 15.00	16.03	≤ 120
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)

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(Miss Khemchuda Insorn)

Analyst

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Technical Management Team

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3. ^{1/} Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and
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4. ^{2/} Total Dissolved Solids (TDS) shall be increased from TDS in receiving water not exceeding 5,000 mg/l
(TDS valve in the last month in receiving water = 25,340 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0187/66
	: (Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 15.17
SAMPLING DATE	: 08/02/2023	ANALYTICAL DATE	: 09-20/02/2023
RECEIVED DATE	: 09/02/2023	SITE OPERATOR	: Mr. Watcharakan Pramakhate
REPORT DATE	: 21/02/2023	FILE CODE	: 223096_WW_February
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD
				Equalization Tank	
pH		4500-H ⁺ B	< 0.10	7.39	-
Color	ADMI	2120 F	< 6.0	37.8	-
Total Suspended Solids	mg/l	2540 D	< 5	14	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 0.50	ND	-
BOD ₅	mg/l	5210 B	< 1.0	24.2	-
COD	mg/l	5220 C	< 15.00	82.44	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0014	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0187/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 15.10
SAMPLING DATE	: 08/02/2023	ANALYTICAL DATE	: 09-20/02/2023
RECEIVED DATE	: 09/02/2023	SITE OPERATOR	: Mr. Watcharakon Pramakhate
REPORT DATE	: 21/02/2023	FILE CODE	: 223096_WW_February
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Effluent from Final Effluent Basin	
pH		4500-H ⁺ B	< 0.10	7.52	5.5-9.0
Color	ADMI	2120 F	< 6.0	17.9	≤ 300
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	
Fat Oil & Grease	mg/l	5520 B	< 0.50	ND	≤ 5
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 C	< 15.00	32.38	≤ 120
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 2017 (AWWA, APHA, WEF)

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(Miss Khemchuda Insorn)

Analyst

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0241/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 09.40
SAMPLING DATE	: 17/02/2023	ANALYTICAL DATE	: 18-27/02/2023
RECEIVED DATE	: 18/02/2023	SITE OPERATOR	: Mr. Watcharakon Pramakhate
REPORT DATE	: 27/02/2023	FILE CODE	: 223096_WW_February
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Effluent from 940-XC1	
pH		4500-H ⁺ B	< 0.10	7.92	5.5-9.0
Color	ADMI	2120 F	< 6.0	18.6	≤ 300
Total Dissolved Solids	mg/l	2540 C	< 50	1,410	≤ 23,700 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	1.3	≤ 20
COD	mg/l	5220 C	< 15.00	15.71	≤ 120
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 2017 (AWWA, APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

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Technical Management Team

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Notification of the Ministry of Industry, B.E.2560 (2017).

4. ^{2/} Total Dissolved Solids (TDS) shall be increased from TDS in receiving water not exceeding 5,000 mg/l
(TDS valve in the last month in receiving water = 18,700 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REQUEST SERVICE No. : 0313/66
(Branch 4 : Aromatics 1 Plant) SAMPLING METHOD : Grab
SAMPLING BY : SECOT Co., Ltd. SAMPLING TIME : 10.20
SAMPLING DATE : 01/03/2023 ANALYTICAL DATE : 02-10/03/2023
RECEIVED DATE : 02/03/2023 SITE OPERATOR : Mr. Watcharakan Pramakhate
REPORT DATE : 13/03/2023 FILE CODE : 223096_WW_March
SAMPLE CONDITION : Normal

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD
		METHODS	(non-detectable)	Equalization Tank	
pH	-	4500-H ⁺ B	< 0.10	7.64	-
Color	ADMI	2120 F	< 6.0	42.4	-
Total Suspended Solids	mg/l	2540 D	< 5	14	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 0.50	1.9	-
BOD ₅	mg/l	5210 B	< 1.0	13.4	-
COD	mg/l	5220 C	< 15.00	50.67	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0015	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 2017 (AWWA, APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

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Araya Tipparuk

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REQUEST SERVICE No. : 0313/66
(Branch 4 : Aromatics 1 Plant) SAMPLING METHOD : Grab
SAMPLING BY : SECOT Co., Ltd. SAMPLING TIME : 10.13
SAMPLING DATE : 01/03/2023 ANALYTICAL DATE : 02-10/03/2023
RECEIVED DATE : 02/03/2023 SITE OPERATOR : Mr. Watcharakan Pramakhate
REPORT DATE : 13/03/2023 FILE CODE : 223096_WW_March
SAMPLE CONDITION : Normal

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Effluent from Final Effluent Basin	
pH	-	4500-H ⁺ B	< 0.10	8.06	5.5-9.0
Color	ADMI	2120 F	< 6.0	17.6	≤ 300
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 0.50	ND	≤ 5
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 C	< 15.00	< 15.00	≤ 120
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 2017 (AWWA, APHA, WEF)

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0313/66
	: (Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 10.34
SAMPLING DATE	: 01/03/2023	ANALYTICAL DATE	: 02-10/03/2023
RECEIVED DATE	: 02/03/2023	SITE OPERATOR	: Mr. Watcharakan Pramakhate
REPORT DATE	: 13/03/2023	FILE CODE	: 223096_WW_March
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Effluent from 940-XC1	
pH	-	4500-H ⁺ B	< 0.10	7.79	5.5-9.0
Color	ADMI	2120 F	< 6.0	18.6	≤ 300
Total Dissolved Solids	mg/l	2540 C	< 50	1,262	≤ 35,300 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 C	< 15.00	38.92	≤ 120
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)

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(Miss Khemchuda Insorn)

Analyst

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4. ^{2/} Total Dissolved Solids (TDS) shall be increased from TDS in receiving water not exceeding 5,000 mg/l
(TDS valve in the last month in receiving water = 30,300 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0538/66
	: (Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 14.00
SAMPLING DATE	: 05/04/2023	ANALYTICAL DATE	: 06-16/04/2023
RECEIVED DATE	: 06/04/2023	SITE OPERATOR	: Mr. Watcharakan Pramakhate
REPORT DATE	: 17/04/2023	FILE CODE	: 223096_WW_April
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD
				Equalization Tank	
pH	-	4500-H ⁺ B	< 0.10	7.38	-
Color	ADMI	2120 F	< 6.0	127	-
Total Suspended Solids	mg/l	2540 D	< 5	7	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 0.50	ND	-
BOD ₅	mg/l	5210 B	< 1.0	13.2	-
COD	mg/l	5220 C	< 15.00	55.81	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. ๖-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. ๖-239-ก-5863

Remark : 1. Reported analysis refers to submitted sample only.

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3. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0538/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 13.50
SAMPLING DATE	: 05/04/2023	ANALYTICAL DATE	: 06-16/04/2023
RECEIVED DATE	: 06/04/2023	SITE OPERATOR	: Mr. Watcharakan Pramakhate
REPORT DATE	: 17/04/2023	FILE CODE	: 223096_WW_April
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Effluent from Final Effluent Basin	
pH	-	4500-H ⁺ B	< 0.10	7.90	5.5-9.0
Color	ADMI	2120 F	< 6.0	19.1	≤ 300
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 0.50	ND	≤ 5
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 C	< 15.00	15.22	≤ 120
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0724/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 13.45
SAMPLING DATE	: 10/05/2023	ANALYTICAL DATE	: 11-17/05/2023
RECEIVED DATE	: 11/05/2023	SITE OPERATOR	: Mr. Watcharakan Pramakhate
REPORT DATE	: 18/05/2023	FILE CODE	: 223096_WW_May
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD
				Equalization Tank	
pH	-	4500-H ⁺ B	< 0.10	7.18	-
Color	ADMI	2120 F	< 6.0	97.1	-
Total Suspended Solids	mg/l	2540 D	< 5	33	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	4.7	-
Fat Oil & Grease	mg/l	5520 B	< 0.50	1.4	-
BOD ₅	mg/l	5210 B	< 1.0	140	-
COD	mg/l	5220 C	< 15.00	234	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0098	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0724/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 13.35
SAMPLING DATE	: 10/05/2023	ANALYTICAL DATE	: 11-17/05/2023
RECEIVED DATE	: 11/05/2023	SITE OPERATOR	: Mr. Watcharakon Pramakhate
REPORT DATE	: 18/05/2023	FILE CODE	: 223096_WW_May
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Effluent from Final Effluent Basin	
pH	-	4500-H ⁺ B	< 0.10	7.81	5.5-9.0
Color	ADMI	2120 F	< 6.0	16.8	≤ 300
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
Sulfide as H ₂ S	mg/l	4500-S ₂ ⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 0.50	ND	≤ 5
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 C	< 15.00	46.70	≤ 120
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0724/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 13.25
SAMPLING DATE	: 10/05/2023	ANALYTICAL DATE	: 11-17/05/2023
RECEIVED DATE	: 11/05/2023	SITE OPERATOR	: Mr. Watcharakon Pramakhate
REPORT DATE	: 18/05/2023	FILE CODE	: 223096_WW_May
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Effluent from 940-XC1	
pH	-	4500-H ⁺ B	< 0.10	8.03	5.5-9.0
Color	ADMI	2120 F	< 6.0	18.1	≤ 300
Total Dissolved Solids	mg/l	2540 C	< 50	1,724	≤ 38,280 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	1.0	≤ 20
COD	mg/l	5220 C	< 15.00	46.70	≤ 120
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)

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 4. ^{2/} Total Dissolved Solids (TDS) shall be increased from TDS in receiving water not exceeding 5,000 mg/l (TDS valve in the last month in receiving water = 33,280 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0910/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 09:10
SAMPLING DATE	: 07/06/2023	ANALYTICAL DATE	: 08-15/06/2023
RECEIVED DATE	: 08/06/2023	SITE OPERATOR	: Mr. Watcharakan Pramakhate
REPORT DATE	: 15/06/2023	FILE CODE	: 223096_WW_June
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD
				Equalization Tank	
pH	-	4500-H ⁺ B	< 0.10	7.42	-
Color	ADMI	2120 F	< 6.0	62.2	-
Total Suspended Solids	mg/l	2540 D	< 5	24	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 0.50	1.4	-
BOD ₅	mg/l	5210 B	< 1.0	46.7	-
COD	mg/l	5220 C	< 15.00	213	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0072	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)

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(Miss Khemchuda Insorn)

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M. Araya Tipparuk

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0910/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 09:00
SAMPLING DATE	: 07/06/2023	ANALYTICAL DATE	: 08-15/06/2023
RECEIVED DATE	: 08/06/2023	SITE OPERATOR	: Mr. Watcharakan Pramakhate
REPORT DATE	: 15/06/2023	FILE CODE	: 223096_WW_June
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Effluent from Final Effluent Basin	
pH	-	4500-H ⁺ B	< 0.10	7.45	5.5-9.0
Color	ADMI	2120 F	< 6.0	17.4	≤ 300
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 0.50	ND	≤ 5
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 C	< 15.00	26.93	≤ 120
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0910/66
	: (Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 09:18
SAMPLING DATE	: 07/06/2023	ANALYTICAL DATE	: 08-15/06/2023
RECEIVED DATE	: 08/06/2023	SITE OPERATOR	: Mr. Watcharakan Pramakhate
REPORT DATE	: 15/06/2023	FILE CODE	: 223096_WW_June
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Effluent from 940-XC1	
pH	-	4500-H ⁺ B	< 0.10	8.00	5.5-9.0
Color	ADMI	2120 F	< 6.0	20.6	≤ 300
Total Dissolved Solids	mg/l	2540 C	< 50	1,270	≤ 29,240 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 C	< 15.00	33.50	≤ 120
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)

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 4. ^{2/} Total Dissolved Solids (TDS) shall be increased from TDS in receiving water not exceeding 5,000 mg/l (TDS valve in the last month in receiving water = 24,240 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0724/66
	: (Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 14:05
SAMPLING DATE	: 10/05/2023	ANALYTICAL DATE	: 11-17/05/2023
RECEIVED DATE	: 11/05/2023	SITE OPERATOR	: Mr. Watcharakan Pramakhate
REPORT DATE	: 18/05/2023	FILE CODE	: 223096_WW_May
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Upstream	
Temperature	°C	2550 B	< 0.5	31.5	-
pH	-	4500-H ⁺ B	< 0.10	9.14	-
Color	ADMI	2120 F	< 6.0	144	-
Total Suspended Solids	mg/l	2540 D	< 5	399	-
Fat Oil & Grease	mg/l	5520 B	< 0.50	ND	-
BOD ₅	mg/l	5210 B	< 1.0	3.6	-
COD	mg/l	5220 C	< 15.00	35.03	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)

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 4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0724/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 14.15
SAMPLING DATE	: 10/05/2023	ANALYTICAL DATE	: 11-17/05/2023
RECEIVED DATE	: 11/05/2023	SITE OPERATOR	: Mr. Watcharakan Pramakhate
REPORT DATE	: 18/05/2023	FILE CODE	: 223096_WW_May
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Downstream	STANDARD ^{1/}
Temperature	°C	2550 B	< 0.5	32.1	-
pH	-	4500-H ⁺ B	< 0.10	9.16	-
Color	ADMI	2120 F	< 6.0	138	-
Total Suspended Solids	mg/l	2540 D	< 5	393	-
Fat Oil & Grease	mg/l	5520 B	< 0.50	ND	-
BOD ₅	mg/l	5210 B	< 1.0	3.4	-
COD	mg/l	5220 C	< 15.00	50.60	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 2017 (AWWA, APHA, WEF)

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(Miss Khemchuda Insorn)

Analyst

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0051/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 11.30
SAMPLING DATE	: 12/01/2023	ANALYTICAL DATE	: 16-17/01/2023
RECEIVED DATE	: 13/01/2023	SITE OPERATOR	: Mr. Watcharakan Pramakhate
REPORT DATE	: 18/01/2023	FILE CODE	: 223096_CW_January
SAMPLE CONDITION	: Normal		

LOCATION DESCRIPTION 1. ระยะห่างจากจุดระบายน้ำทิ้งของนิคมฯมาบตาพุด (ปากคลองชักหมาก) 500 เมตร

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION I	STANDARD
Total Dissolved Solids	mg/l	2540 C	< 25	18,700	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 2017 (AWWA, APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

M. Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	0189/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	Grab
SAMPLING BY	SECOT Co., Ltd.	SAMPLING TIME	11.30
SAMPLING DATE	09/02/2023	ANALYTICAL DATE	10,13/02/2023
RECEIVED DATE	10/02/2023	SITE OPERATOR	Mr. Watcharakan Pramakhate
REPORT DATE	16/02/2023	FILE CODE	223096_CW_February
SAMPLE CONDITION	Normal		
LOCATION DESCRIPTION	1.ระยะห่างจากจุดระบายน้ำทิ้งของนิคมฯมาบตาพุด (ปากคลองชักหาหมาก) 500 เมตร		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION 1	STANDARD
Total Dissolved Solids	mg/l	2540 C	<25	30,300	

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23RD ED, 2017 (AWWA, APHA, WEF)

Khemchuda Insom

(Miss Khemchuda Insom)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	0375/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	Grab
SAMPLING BY	SECOT Co., Ltd.	SAMPLING TIME	14:45-14:51
SAMPLING DATE	09/03/2023	ANALYTICAL DATE	13-14/03/2023
RECEIVED DATE	10/03/2023	SITE OPERATOR	Mr. Watcharakan Pramakhate
REPORT DATE	16/03/2023	FILE CODE	223096_CW_March
SAMPLE CONDITION	Normal		
LOCATION DESCRIPTION	1.ระยะห่างจากจุดระบายน้ำทิ้งของนิคมฯมาบตาพุด (ปากคลองชักหาหมาก) 500 เมตร		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION 1	STANDARD
Total Dissolved Solids	mg/l	2540 C	<25	31,540	

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23RD ED, 2017 (AWWA, APHA, WEF)

Khemchuda Insom

(Miss Khemchuda Insom)

Analyst

Araya Tipparuk

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Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	0575/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	Grab
SAMPLING BY	SECOT Co., Ltd.	SAMPLING TIME	11.58
SAMPLING DATE	11/04/2023	ANALYTICAL DATE	17-18/04/2023
RECEIVED DATE	12/04/2023	SITE OPERATOR	Mr. Watcharakan Pramakhate
REPORT DATE	19/04/2023	FILE CODE	223096_CW_March
SAMPLE CONDITION	Normal		
LOCATION DESCRIPTION	1.ระยะห่างจากจุดระบายน้ำทิ้งของนิคมฯมาบตาพุด (ปากคลองชักหาหมาก) 500 เมตร		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION 1	STANDARD
Total Dissolved Solids	mg/l	2540 C	< 25	33,280	*

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED., 2017 (AWWA, APHA, WEF)

(Miss Khemchuda Insorn)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	0740/66
	(Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	Grab
SAMPLING BY	SECOT Co., Ltd.	SAMPLING TIME	14.40
SAMPLING DATE	11/05/2023	ANALYTICAL DATE	15-16/05/2023
RECEIVED DATE	12/05/2023	SITE OPERATOR	Mr. Watcharakan Pramakhate
REPORT DATE	16/05/2023	FILE CODE	223096_CW_May
SAMPLE CONDITION	Normal		
LOCATION DESCRIPTION	1.ระยะห่างจากจุดระบายน้ำทิ้งของนิคมฯมาบตาพุด (ปากคลองชักหาหมาก) 500 เมตร		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION 1	STANDARD
Total Dissolved Solids	mg/l	2540 C	< 25	24,240	*

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED., 2017 (AWWA, APHA, WEF)

(Miss Khemchuda Insorn)

Analyst

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Technical Management Team

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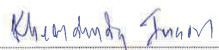
WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0926/66
	: (Branch 4 : Aromatics 1 Plant)	SAMPLING METHOD	: Grab
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 11:05
SAMPLING DATE	: 08/06/2023	ANALYTICAL DATE	: 13-14/06/2023
RECEIVED DATE	: 09/06/2023	SITE OPERATOR	: Mr. Watcharakan Pramakhate
REPORT DATE	: 14/06/2023	FILE CODE	: 223096_CW_June
SAMPLE CONDITION	: Normal		

LOCATION DESCRIPTION 1.ระยะห่างจากจุดระบายน้ำทิ้งของนิคมฯมาบตาพุด (ปากคลองชักหมาก) 500 เมตร

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD
		METHODS	(non-detectable)	I	
Total Dissolved Solids	mg/l	2540 C	< 25	38,020	

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED, 2017 (AWWA, APHA, WEF)



(Miss Khemchuda Insorn)

Analyst



(Mrs. Araya Tipparuk)

Technical Management Team

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ภาคผนวก ง.4

ใบรับรองผลการตรวจวัดคุณภาพน้ำใต้ดิน



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GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REQUEST SERVICE No. : 0424/66
(Branch 4 : Aromatics 1 Plant) SAMPLING METHOD : Pneumatic Bladder Pump
SAMPLING BY : SECOT Co., Ltd. SAMPLING TIME : 10:49-10:55
SAMPLING DATE : 13/03/2023 ANALYTICAL DATE : 21/03/2023
RECEIVED DATE : 14/03/2023 SITE OPERATOR : Mr. Aniwat Pimwanna
REPORT DATE : 21/03/2023 FILE CODE : 223096_GW_March
SAMPLE CONDITION : Normal

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-01	STANDARD ^{1/}
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 2017 (AWWA APHA WEF)


(Miss Krisana Chanthoom)

Analyst

REG. NO. ๓-239-๓-7802


(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. ๓-239-๓-5863

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GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REQUEST SERVICE No. : 0424/66
(Branch 4 : Aromatics 1 Plant) SAMPLING METHOD : Pneumatic Bladder Pump
SAMPLING BY : SECOT Co., Ltd. SAMPLING TIME : 10:49-10:55
SAMPLING DATE : 13/03/2023 ANALYTICAL DATE : 16/03/2023
RECEIVED DATE : 14/03/2023 SITE OPERATOR : Mr. Aniwat Pimwanna
REPORT DATE : 21/03/2023 FILE CODE : 223096_GW_March
SAMPLE CONDITION : Normal

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-01	STANDARD ^{1/}
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Toluene	mg/l	6200 B	< 0.0002	ND	≤ 5.0
m-Xylene	mg/l	6200 B	< 0.0002	ND	≤ 24
o-Xylene	mg/l	6200 B	< 0.0002	ND	≤ 24
p-Xylene	mg/l	6200 B	< 0.0002	ND	≤ 24
Total Xylenes	mg/l	6200 B	< 0.0006	ND	≤ 24

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 2017 (AWWA APHA WEF)


(Miss Jutarat Jaemruen)

Analyst

REG. NO. ๓-239-๓-5827


(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. ๓-239-๓-5863

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GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REQUEST SERVICE No. : 0424/66
(Branch 4 : Aromatics 1 Plant) SAMPLING METHOD : Pneumatic Bladder Pump
SAMPLING BY : SECOT Co., Ltd. SAMPLING TIME : 10:08-10:12
SAMPLING DATE : 13/03/2023 ANALYTICAL DATE : 21/03/2023
RECEIVED DATE : 14/03/2023 SITE OPERATOR : Mr. Aniwat Pimwanna
REPORT DATE : 21/03/2023 FILE CODE : 223096_GW_March
SAMPLE CONDITION : Normal

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-06	STANDARD ^{1/}
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)


(Miss Krisana Chanthoom)

Analyst

REG. NO. ๖-239-๖-7802


(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. ๖-239-๖-5863

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GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REQUEST SERVICE No. : 0424/66
(Branch 4 : Aromatics 1 Plant) SAMPLING METHOD : Pneumatic Bladder Pump
SAMPLING BY : SECOT Co., Ltd. SAMPLING TIME : 10:08-10:12
SAMPLING DATE : 13/03/2023 ANALYTICAL DATE : 16/03/2023
RECEIVED DATE : 14/03/2023 SITE OPERATOR : Mr. Aniwat Pimwanna
REPORT DATE : 21/03/2023 FILE CODE : 223096_GW_March
SAMPLE CONDITION : Normal

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-06	STANDARD ^{1/}
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Toluene	mg/l	6200 B	< 0.0002	ND	≤ 5.0
m-Xylene	mg/l	6200 B	< 0.0002	ND	≤ 24
o-Xylene	mg/l	6200 B	< 0.0002	ND	≤ 24
p-Xylene	mg/l	6200 B	< 0.0002	ND	≤ 24
Total Xylenes	mg/l	6200 B	< 0.0006	ND	≤ 24

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)


(Miss Jutarat Jaemruen)

Analyst

REG. NO. ๖-239-๖-5827


(Mrs. Araya Tipparuk)

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0424/66
	(Branch 8 : Tank Farm Plant)	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 13:51-13:56
SAMPLING DATE	: 13/03/2023	ANALYTICAL DATE	: 21/03/2023
RECEIVED DATE	: 14/03/2023	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 21/03/2023	FILE CODE	: 223096_GW_March
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-10	STANDARD ^{1/}
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)


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Analyst

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.	: 0424/66
	(Branch 8 : Tank Farm Plant)	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 13:51-13:56
SAMPLING DATE	: 13/03/2023	ANALYTICAL DATE	: 16/03/2023
RECEIVED DATE	: 14/03/2023	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 21/03/2023	FILE CODE	: 223096_GW_March
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-10	STANDARD ^{1/}
Benzene	mg/l	6200 B	< 0.0002	0.0032	≤ 0.2
Toluene	mg/l	6200 B	< 0.0002	ND	≤ 5.0
m-Xylene	mg/l	6200 B	< 0.0002	ND	≤ 24
o-Xylene	mg/l	6200 B	< 0.0002	0.0002	≤ 24
p-Xylene	mg/l	6200 B	< 0.0002	0.0004	≤ 24
Total Xylenes	mg/l	6200 B	< 0.0006	0.0006	≤ 24

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA, APHA, WEF)


(Miss Jutarat Jaemruen)

Analyst

REG. NO. ๖-239-๖-5827



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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.:	: 0424/66
	(Branch 8 : Tank Farm Plant)	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 14:11-14:15
SAMPLING DATE	: 13/03/2023	ANALYTICAL DATE	: 21/03/2023
RECEIVED DATE	: 14/03/2023	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 21/03/2023	FILE CODE	: 223096_GW_March
SAMPLE CONDITION	: Normal		


PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-13	STANDARD ^{1/}
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA APHA, WEF)


(Miss Krisana Chanthoom)

Analyst

REG. NO. 7-239-0-7802


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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REQUEST SERVICE No.:	: 0424/66
	(Branch 8 : Tank Farm Plant)	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING TIME	: 14:11-14:15
SAMPLING DATE	: 13/03/2023	ANALYTICAL DATE	: 16/03/2023
RECEIVED DATE	: 14/03/2023	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 21/03/2023	FILE CODE	: 223096_GW_March
SAMPLE CONDITION	: Normal		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-13	STANDARD ^{1/}
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Toluene	mg/l	6200 B	< 0.0002	ND	≤ 5.0
m-Xylene	mg/l	6200 B	< 0.0002	ND	≤ 24
o-Xylene	mg/l	6200 B	< 0.0002	ND	≤ 24
p-Xylene	mg/l	6200 B	< 0.0002	ND	≤ 24
Total Xylenes	mg/l	6200 B	< 0.0006	ND	≤ 24

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA APHA, WEF)


(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-5827


(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-5863

Remark : 1. Reported analysis refers to submitted sample only.

2. This report shall not be reproduced, except in full, without official approval.

3. ^{1/} Notification of the Ministry of Industry, B.E.2559 (2016).

ภาคผนวก ง.5

ใบรับรองผลการตรวจวัดระดับเสียงเฉลี่ย 24 ชั่วโมง (Leq 24 hr)



Noise Monitoring Result : Community Noise

MTR-PTTGC4

Location : Northern Area of PTTGC Branch 4 Aramatics	Monitor Period : 01-08 Feb 2023
SLM Model : RION NL-21	Serial No : 00198277
Site Operator : Mr. Siwanon Kulawong	

Calibrator Model : RION NC-74	Serial No : 34283648
Calibration Ref dB(A) : 94.0	Certified Date : 13 Jan 2023
SLM Reading / Adjust dB(A) : 93.9/0.1	Expire Date : 12 Jan 2024
Cal Sheet No.: NC-74-2023-009	

Time	Equivalent Sound Pressure Level (dB(A))							
	01-02 Feb 2023	02-03 Feb 2023	03-04 Feb 2023	04-05 Feb 2023	05-06 Feb 2023	06-07 Feb 2023	07-08 Feb 2023	
09:00 - 10:00	67.2	66.9	67.0	65.6	75.0	66.9	67.7	
10:00 - 11:00	67.0	67.2	67.2	65.8	64.3	67.3	66.4	
11:00 - 12:00	67.0	66.9	67.5	64.8	64.6	67.0	66.3	
12:00 - 13:00	67.3	67.4	66.9	64.7	64.1	67.1	66.6	
13:00 - 14:00	66.6	67.3	67.3	64.8	64.2	70.0	67.8	
14:00 - 15:00	66.8	66.4	67.8	64.5	64.4	66.8	66.8	
15:00 - 16:00	67.3	67.3	68.9	66.9	64.5	66.1	66.5	
16:00 - 17:00	68.1	67.9	67.9	66.0	65.2	67.4	67.0	
17:00 - 18:00	68.7	68.9	66.8	66.2	64.7	68.8	68.2	
18:00 - 19:00	67.8	68.1	64.3	62.9	65.1	67.3	68.6	
19:00 - 20:00	65.9	65.7	62.4	62.7	63.4	65.5	66.5	
20:00 - 21:00	64.1	63.4	60.7	61.3	60.6	63.0	63.5	
21:00 - 22:00	62.6	61.7	65.4	62.3	59.7	60.8	61.8	
22:00 - 23:00	61.7	60.3	61.8	60.3	59.7	58.6	60.3	
23:00 - 00:00	64.1	59.2	57.4	58.1	59.8	58.7	63.7	
00:00 - 01:00	59.6	57.7	56.6	58.9	57.6	59.7	60.4	
01:00 - 02:00	58.1	56.6	57.8	56.5	57.3	59.5	60.3	
02:00 - 03:00	60.2	58.5	57.8	58.3	58.2	56.4	57.7	
03:00 - 04:00	58.2	58.4	61.0	59.8	58.9	57.0	58.7	
04:00 - 05:00	60.0	59.7	63.8	61.3	61.1	59.1	59.0	
05:00 - 06:00	65.0	63.3	69.5	68.2	65.1	59.6	61.2	
06:00 - 07:00	70.3	69.6	69.2	68.1	70.8	67.3	66.8	
07:00 - 08:00	72.0	70.5	66.8	66.8	70.9	70.4	71.2	
08:00 - 09:00	69.4	67.9	64.2	74.6	68.6	71.0	70.9	
Leq(24)*	66.6	66.1	65.8	65.8	66.3	66.2	66.2	
Ldn	71.1	70.1	71.2	70.4	70.8	69.2	69.7	
Lmax **	93.0	89.7	91.7	90.0	92.1	95.0	92.4	
Standard-24Hr	70 dB(A)							
Standard-Max	115 dB(A)							

Remark : * Average time between 09:00-09:00

** Maximum Sound Pressure Level between 09:00-09:00

Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-PTTGC4

Location : Northern Area of PTTGC Branch 4 Aramatics	Monitor Period : 01-08 Feb 2023
SLM Model : RION NL-21	Serial No : 00198277
Site Operator : Mr. Siwanon Kulawong	

Calibrator Model : RION NC-74	Serial No : 34283648
Calibration Ref dB(A) : 94.0	Certified Date : 13 Jan 2023
SLM Reading / Adjust dB(A) : 93.9/0.1	Expire Date : 12 Jan 2024
Cal Sheet No.: NC-74-2023-009	

Time	L90 (dB(A))							
	01-02 Feb 2023	02-03 Feb 2023	03-04 Feb 2023	04-05 Feb 2023	05-06 Feb 2023	06-07 Feb 2023	07-08 Feb 2023	
09:00 - 10:00	60.5	59.7	60.0	54.3	57.0	59.7	60.7	
10:00 - 11:00	60.1	60.0	59.5	54.8	54.9	60.0	59.9	
11:00 - 12:00	59.9	59.8	59.5	54.1	53.9	59.8	59.9	
12:00 - 13:00	59.6	59.3	59.6	54.3	54.3	59.3	59.5	
13:00 - 14:00	60.1	60.4	60.0	54.6	55.0	59.9	60.1	
14:00 - 15:00	60.1	60.0	60.9	55.0	55.1	59.6	60.4	
15:00 - 16:00	60.5	60.3	62.1	57.0	55.4	59.8	60.2	
16:00 - 17:00	60.7	60.9	59.5	56.6	55.7	60.6	60.8	
17:00 - 18:00	59.1	58.9	57.9	56.5	55.1	60.7	60.7	
18:00 - 19:00	58.3	59.4	54.9	54.5	55.3	58.2	59.5	
19:00 - 20:00	57.0	56.3	54.3	54.0	54.2	55.3	57.1	
20:00 - 21:00	56.3	55.4	53.3	54.1	53.9	53.7	55.0	
21:00 - 22:00	55.1	54.2	53.8	53.9	54.0	53.5	53.4	
22:00 - 23:00	54.1	53.9	52.9	53.6	54.0	53.3	53.0	
23:00 - 00:00	53.9	53.5	52.3	53.4	53.8	53.3	52.9	
00:00 - 01:00	53.8	53.0	52.5	53.2	53.8	53.1	52.8	
01:00 - 02:00	53.0	52.9	52.3	53.3	53.8	53.0	52.7	
02:00 - 03:00	53.1	52.9	52.3	53.5	53.8	53.1	52.9	
03:00 - 04:00	57.0	53.0	52.7	53.5	53.7	53.0	52.8	
04:00 - 05:00	53.6	53.1	53.5	53.6	53.9	53.0	52.8	
05:00 - 06:00	54.3	53.7	60.6	57.7	54.4	53.4	53.0	
06:00 - 07:00	63.2	60.7	59.5	56.9	62.9	56.1	54.3	
07:00 - 08:00	63.7	62.8	54.9	55.4	63.5	63.0	63.8	
08:00 - 09:00	61.4	60.4	54.1	68.0	60.1	62.6	63.4	
L90(avg)*	58.9	58.4	57.7	57.5	56.7	58.3	58.7	

Remark : * Average time between 09:00-09:00

Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-PTTGC4

Location : Southern Area of PTTGC Branch 4 Aromatics **Monitor Period :** 01-08 Feb 2023
SLM Model : RION NL-21 **Serial No :** 00521703
Site Operator : Mr. Siwanon Kulawong

Calibrator Model : RION NC-74 **Serial No :** 34283648
Calibration Ref dB(A) : 94.0 **Certified Date :** 13 Jan 2023
SLM Reading / Adjust dB(A) : 93.8/0.2 **Expire Date :** 12 Jan 2024
Cal Sheet No.: NC-74-2023-009

Time	Equivalent Sound Pressure Level (dB(A))						
	01-02 Feb 2023	02-03 Feb 2023	03-04 Feb 2023	04-05 Feb 2023	05-06 Feb 2023	06-07 Feb 2023	07-08 Feb 2023
10:00 - 11:00	64.4	64.6	64.0	64.6	64.1	65.6	63.9
11:00 - 12:00	64.7	64.2	63.4	64.3	63.8	64.4	63.5
12:00 - 13:00	64.8	65.0	63.8	64.3	63.8	64.2	63.5
13:00 - 14:00	64.9	65.6	64.1	64.3	64.0	64.1	63.6
14:00 - 15:00	66.4	65.5	63.6	64.4	63.8	64.0	64.0
15:00 - 16:00	67.8	65.2	63.3	64.4	64.0	63.8	63.8
16:00 - 17:00	68.4	65.0	64.3	64.3	63.9	63.9	64.1
17:00 - 18:00	68.6	65.1	64.3	64.4	64.0	64.0	63.9
18:00 - 19:00	68.7	64.7	64.5	64.9	64.8	64.5	64.1
19:00 - 20:00	68.6	68.1	64.3	64.8	64.5	64.3	64.1
20:00 - 21:00	67.9	68.2	64.4	64.6	64.7	64.4	64.0
21:00 - 22:00	67.2	65.3	64.1	64.6	63.8	64.6	64.4
22:00 - 23:00	66.7	65.3	68.2	64.8	63.8	64.7	64.7
23:00 - 00:00	66.9	64.7	66.2	64.6	63.8	64.8	64.6
00:00 - 01:00	66.5	64.7	65.8	64.3	63.9	64.5	64.7
01:00 - 02:00	66.5	64.7	66.7	64.3	64.4	64.6	64.7
02:00 - 03:00	66.7	65.0	66.2	64.3	65.0	64.6	64.7
03:00 - 04:00	65.8	64.7	65.7	64.4	65.3	64.6	65.8
04:00 - 05:00	65.7	64.9	65.9	64.4	65.5	64.7	64.6
05:00 - 06:00	65.9	65.2	65.7	64.3	66.0	64.6	64.6
06:00 - 07:00	65.7	64.5	66.1	64.4	66.0	64.8	64.8
07:00 - 08:00	66.5	63.9	65.8	64.9	65.7	64.5	64.6
08:00 - 09:00	67.3	63.6	65.4	64.8	65.1	64.1	64.1
09:00 - 10:00	65.5	64.5	64.9	64.6	64.9	64.0	63.8
Leq(24)*	66.8	65.2	65.2	64.5	64.6	64.4	64.3
Ldn	72.8	71.4	72.5	70.9	71.3	71.0	71.1
Lmax **	103.1	80.2	93.7	79.7	82.5	79.0	82.2
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 10:00-10:00

** Maximum Sound Pressure Level between 10:00-10:00

Ladawan W.

(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-PTTGC4

Location : Southern Area of PTTGC Branch 4 Aromatics **Monitor Period :** 01-08 Feb 2023
SLM Model : RION NL-21 **Serial No :** 00521703
Site Operator : Mr. Siwanon Kulawong

Calibrator Model : RION NC-74 **Serial No :** 34283648
Calibration Ref dB(A) : 94.0 **Certified Date :** 13 Jan 2023
SLM Reading / Adjust dB(A) : 93.8/0.2 **Expire Date :** 12 Jan 2024
Cal Sheet No.: NC-74-2023-009

Time	L90 (dB(A))						
	01-02 Feb 2023	02-03 Feb 2023	03-04 Feb 2023	04-05 Feb 2023	05-06 Feb 2023	06-07 Feb 2023	07-08 Feb 2023
10:00 - 11:00	63.4	63.5	62.7	63.5	63.3	64.2	63.1
11:00 - 12:00	63.4	63.2	62.5	63.2	63.1	63.5	62.7
12:00 - 13:00	63.7	63.7	62.9	63.6	62.9	63.2	62.6
13:00 - 14:00	63.7	64.4	62.8	63.5	63.0	63.2	62.6
14:00 - 15:00	64.9	64.4	62.7	63.6	62.7	63.0	62.7
15:00 - 16:00	65.7	64.3	62.5	63.5	62.8	62.8	62.7
16:00 - 17:00	66.5	64.0	63.4	63.3	62.6	62.9	63.0
17:00 - 18:00	66.8	64.2	63.5	63.6	62.9	63.1	63.0
18:00 - 19:00	67.0	64.1	63.6	64.0	63.5	63.8	63.4
19:00 - 20:00	67.5	64.8	63.3	64.3	63.9	63.6	63.6
20:00 - 21:00	66.5	65.3	63.6	64.1	63.9	63.8	63.5
21:00 - 22:00	66.4	64.9	63.3	64.1	63.0	64.0	63.9
22:00 - 23:00	66.1	64.6	64.3	64.3	62.9	64.1	64.1
23:00 - 00:00	66.0	64.2	65.3	63.5	63.0	64.1	64.0
00:00 - 01:00	65.7	64.3	65.3	63.2	62.9	64.0	64.1
01:00 - 02:00	65.8	64.2	66.2	63.6	63.3	64.0	64.1
02:00 - 03:00	65.9	64.3	65.4	63.5	63.7	64.0	64.2
03:00 - 04:00	64.9	64.0	65.3	63.6	64.0	63.9	64.1
04:00 - 05:00	64.8	64.2	65.2	63.5	64.4	64.0	64.1
05:00 - 06:00	64.9	64.2	65.0	63.3	64.8	63.8	64.2
06:00 - 07:00	64.7	63.8	65.0	63.6	65.3	64.0	64.2
07:00 - 08:00	65.4	62.7	65.1	64.0	64.8	63.8	64.1
08:00 - 09:00	65.8	62.7	64.4	64.3	64.4	63.3	63.1
09:00 - 10:00	63.7	63.1	64.2	64.1	64.3	63.1	63.0
L90(avg)*	65.5	64.1	64.2	63.7	63.6	63.7	63.5

Remark : * Average time between 10:00-10:00

Ladawan W.

(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-PTTGC4

Location : Eastern Area of PTTGC Branch 4 Aromatics
SLM Model : RION NL-21
Site Operator : Mr. Siwanon Kulawong

Monitor Period : 01-08 Feb 2023

Serial No : 00487723

Calibrator Model : RION NC-74
Calibration Ref dB(A) : 94.0
SLM Reading / Adjust dB(A) : 93.7/0.3
Cal Sheet No.: NC-74-2023-009

Serial No : 34283648

Certified Date : 13 Jan 2023

Expire Date : 12 Jan 2024

Time	Equivalent Sound Pressure Level (dB(A))						
	01-02 Feb 2023	02-03 Feb 2023	03-04 Feb 2023	04-05 Feb 2023	05-06 Feb 2023	06-07 Feb 2023	07-08 Feb 2023
10:00 - 11:00	66.7	66.2	66.2	65.5	65.6	65.9	65.9
11:00 - 12:00	66.8	66.2	66.2	65.6	65.7	65.7	65.9
12:00 - 13:00	66.4	66.4	66.3	65.8	65.5	65.6	65.6
13:00 - 14:00	66.9	66.5	66.2	65.7	65.6	65.8	65.5
14:00 - 15:00	68.0	66.5	66.4	65.8	65.6	65.7	65.4
15:00 - 16:00	66.7	67.1	66.5	65.8	65.7	65.8	65.8
16:00 - 17:00	66.3	66.4	66.3	65.8	66.0	65.9	65.7
17:00 - 18:00	66.2	66.3	66.3	65.9	66.0	65.9	65.8
18:00 - 19:00	66.1	66.2	66.1	65.8	65.9	66.1	65.8
19:00 - 20:00	66.1	66.2	66.2	65.6	65.6	65.8	65.6
20:00 - 21:00	66.1	66.2	66.1	65.6	65.8	65.9	65.6
21:00 - 22:00	66.0	66.2	66.1	65.6	65.9	65.8	66.3
22:00 - 23:00	65.8	66.0	67.3	65.8	65.7	65.8	66.2
23:00 - 00:00	66.0	66.3	65.9	65.7	66.2	65.8	66.0
00:00 - 01:00	65.9	66.1	65.7	65.7	66.2	65.8	66.2
01:00 - 02:00	66.0	66.2	65.6	65.6	66.0	65.8	66.9
02:00 - 03:00	66.0	66.2	65.7	65.8	66.3	65.8	66.2
03:00 - 04:00	66.0	66.0	65.7	65.9	66.9	65.8	66.1
04:00 - 05:00	66.0	66.2	65.8	65.8	66.4	65.7	66.0
05:00 - 06:00	65.7	66.3	65.5	65.8	66.2	65.7	65.9
06:00 - 07:00	66.0	66.4	65.6	65.8	66.1	65.7	65.9
07:00 - 08:00	66.3	66.5	65.9	65.8	65.9	65.7	66.2
08:00 - 09:00	66.2	66.5	66.0	65.9	66.0	65.8	66.1
09:00 - 10:00	66.5	66.8	65.8	65.7	66.0	65.7	65.9
Leq(24)*	66.3	66.3	66.1	65.7	66.0	65.8	65.9
Ldn	72.4	72.6	72.4	72.2	72.6	72.2	72.5
Lmax **	82.9	89.3	91.0	80.5	76.1	75.6	79.3
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 10:00-10:00

** Maximum Sound Pressure Level between 10:00-10:00

Ladawan N.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist

Preeda S.
 (Miss Preeda Somjai)
 Technical Management Team



Noise Monitoring Result : Background Noise

MTR-PTTGC4

Location : Eastern Area of PTTGC Branch 4 Aromatics
SLM Model : RION NL-21
Site Operator : Mr. Siwanon Kulawong

Monitor Period : 01-08 Feb 2023

Serial No : 00487723

Calibrator Model : RION NC-74
Calibration Ref dB(A) : 94.0
SLM Reading / Adjust dB(A) : 93.7/0.3
Cal Sheet No.: NC-74-2023-009

Serial No : 34283648

Certified Date : 13 Jan 2023

Expire Date : 12 Jan 2024

Time	L90 (dB(A))						
	01-02 Feb 2023	02-03 Feb 2023	03-04 Feb 2023	04-05 Feb 2023	05-06 Feb 2023	06-07 Feb 2023	07-08 Feb 2023
10:00 - 11:00	66.0	65.8	65.7	65.1	65.4	65.7	65.4
11:00 - 12:00	66.2	65.7	65.8	65.1	65.3	65.3	65.3
12:00 - 13:00	66.1	66.0	65.9	65.4	65.2	65.3	65.2
13:00 - 14:00	66.4	66.1	65.8	65.4	65.3	65.5	65.1
14:00 - 15:00	66.5	66.1	66.0	65.4	65.3	65.4	65.0
15:00 - 16:00	66.1	66.1	66.1	65.5	65.5	65.4	65.4
16:00 - 17:00	66.0	66.0	66.0	65.4	65.7	65.6	65.4
17:00 - 18:00	65.9	66.0	66.0	65.6	65.8	65.7	65.4
18:00 - 19:00	65.7	66.0	65.8	65.4	65.6	65.7	65.5
19:00 - 20:00	65.9	65.9	65.8	65.3	65.4	65.5	65.2
20:00 - 21:00	65.9	65.9	65.8	65.3	65.5	65.5	65.3
21:00 - 22:00	65.8	66.0	65.8	65.4	65.7	65.5	65.7
22:00 - 23:00	65.6	65.8	65.6	65.6	65.5	65.6	65.7
23:00 - 00:00	65.8	66.0	65.5	65.4	65.7	65.6	65.6
00:00 - 01:00	65.8	65.8	65.5	65.5	65.7	65.5	65.7
01:00 - 02:00	65.8	66.0	65.4	65.4	65.7	65.6	66.0
02:00 - 03:00	65.8	65.9	65.5	65.6	65.9	65.6	65.8
03:00 - 04:00	65.8	65.8	65.5	65.7	66.0	65.6	65.7
04:00 - 05:00	65.7	66.0	65.5	65.6	65.9	65.5	65.7
05:00 - 06:00	65.6	66.0	65.3	65.6	65.9	65.5	65.5
06:00 - 07:00	65.6	66.1	65.4	65.5	65.8	65.5	65.6
07:00 - 08:00	65.8	65.9	65.6	65.5	65.6	65.4	65.8
08:00 - 09:00	65.8	65.8	65.6	65.5	65.7	65.4	65.8
09:00 - 10:00	66.0	65.9	65.4	65.5	65.8	65.3	65.6
L90(avg)*	65.9	65.9	65.7	65.4	65.6	65.5	65.5

Remark : * Average time between 10:00-10:00

Ladawan N.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist

Preeda S.
 (Miss Preeda Somjai)
 Technical Management Team



Noise Monitoring Result : Community Noise

MTR-PTTGC4

Location : Western Area of PTTGC Branch 4 Aromatics Monitor Period : 01-08 Feb 2023
 SLM Model : RION NL-21 Serial No : 00187481
 Site Operator : Mr. Siwanon Kulawong

Calibrator Model : RION NC-74 Serial No : 34283648
 Calibration Ref dB(A) : 94.0 Certified Date : 13 Jan 2023
 SLM Reading / Adjust dB(A) : 94.1/-0.1 Expire Date : 12 Jan 2024
 Cal Sheet No.: NC-74-2023-009

Time	Equivalent Sound Pressure Level (dB(A))						
	01-02 Feb 2023	02-03 Feb 2023	03-04 Feb 2023	04-05 Feb 2023	05-06 Feb 2023	06-07 Feb 2023	07-08 Feb 2023
10:00 - 11:00	67.9	67.4	67.3	67.1	67.2	67.0	67.0
11:00 - 12:00	67.2	67.9	68.3	67.1	66.5	67.2	66.6
12:00 - 13:00	67.6	67.9	68.6	66.9	67.1	67.2	66.6
13:00 - 14:00	67.6	67.9	67.9	67.6	67.2	66.9	66.6
14:00 - 15:00	67.7	67.7	67.9	67.1	67.2	66.9	66.6
15:00 - 16:00	67.1	68.5	67.9	67.4	67.3	67.2	66.6
16:00 - 17:00	67.3	67.7	67.9	67.4	67.1	67.1	66.4
17:00 - 18:00	67.5	69.1	67.7	67.4	66.9	67.0	66.5
18:00 - 19:00	67.3	68.8	67.7	68.0	66.8	67.0	66.7
19:00 - 20:00	67.9	67.9	67.3	68.3	66.9	66.9	67.1
20:00 - 21:00	67.7	68.3	67.2	67.5	66.9	66.5	67.6
21:00 - 22:00	67.6	68.3	67.6	67.2	67.0	66.7	67.3
22:00 - 23:00	67.5	68.0	68.7	67.0	67.0	67.0	67.0
23:00 - 00:00	67.3	68.1	68.8	67.8	67.3	66.5	66.7
00:00 - 01:00	67.4	68.1	68.3	67.6	67.3	67.2	66.6
01:00 - 02:00	67.7	68.1	67.4	67.2	67.0	67.1	66.7
02:00 - 03:00	67.4	68.0	67.0	67.3	66.6	67.1	66.7
03:00 - 04:00	67.1	68.0	67.7	67.1	66.7	67.3	66.7
04:00 - 05:00	67.6	68.0	66.9	67.2	66.9	67.1	66.8
05:00 - 06:00	67.3	67.7	67.2	66.9	67.1	67.0	66.9
06:00 - 07:00	67.5	67.6	66.9	67.0	67.1	66.9	67.1
07:00 - 08:00	67.6	68.0	67.4	67.1	66.9	66.9	67.2
08:00 - 09:00	67.7	68.0	67.4	67.1	66.8	66.7	66.3
09:00 - 10:00	67.9	67.8	66.7	67.6	66.9	66.9	66.8
Leq(24)*	67.5	68.0	67.7	67.3	67.0	67.0	66.8
Ldn	73.9	74.4	74.1	73.7	73.4	73.4	73.2
Lmax **	84.4	80.3	90.5	80.8	78.0	78.8	81.1
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 10:00-10:00

** Maximum Sound Pressure Level between 10:00-10:00

Ladawan W.

(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-PTTGC4

Location : Western Area of PTTGC Branch 4 Aromatics Monitor Period : 01-08 Feb 2023
 SLM Model : RION NL-21 Serial No : 00187481
 Site Operator : Mr. Siwanon Kulawong

Calibrator Model : RION NC-74 Serial No : 34283648
 Calibration Ref dB(A) : 94.0 Certified Date : 13 Jan 2023
 SLM Reading / Adjust dB(A) : 94.1/-0.1 Expire Date : 12 Jan 2024
 Cal Sheet No.: NC-74-2023-009

Time	L90 (dB(A))						
	01-02 Feb 2023	02-03 Feb 2023	03-04 Feb 2023	04-05 Feb 2023	05-06 Feb 2023	06-07 Feb 2023	07-08 Feb 2023
10:00 - 11:00	66.4	66.8	66.9	66.6	66.7	66.6	66.6
11:00 - 12:00	66.5	67.5	67.7	66.4	66.0	66.7	66.1
12:00 - 13:00	67.2	67.5	68.0	66.2	66.4	66.7	66.1
13:00 - 14:00	67.2	67.5	67.5	66.9	66.8	66.3	66.1
14:00 - 15:00	67.2	67.0	67.5	66.4	66.8	66.4	66.1
15:00 - 16:00	66.3	68.1	67.5	67.0	66.8	66.7	66.1
16:00 - 17:00	66.7	66.8	67.4	66.9	66.6	66.6	66.0
17:00 - 18:00	67.0	68.6	67.2	66.9	66.4	66.6	65.9
18:00 - 19:00	66.8	68.4	67.2	67.1	66.4	66.5	66.2
19:00 - 20:00	67.2	67.1	66.5	67.9	66.5	66.5	66.2
20:00 - 21:00	67.3	67.8	66.5	67.1	66.5	65.9	67.1
21:00 - 22:00	67.2	67.8	66.5	66.9	66.5	66.1	66.8
22:00 - 23:00	66.6	67.6	68.1	66.1	66.5	66.6	66.5
23:00 - 00:00	66.7	67.7	67.6	67.4	66.8	65.9	66.3
00:00 - 01:00	66.6	67.4	67.8	67.1	66.9	66.6	66.2
01:00 - 02:00	67.2	67.7	66.3	66.9	66.3	66.6	66.3
02:00 - 03:00	67.0	67.6	66.1	66.9	66.1	66.6	66.3
03:00 - 04:00	66.5	67.7	67.2	66.7	66.3	66.8	66.3
04:00 - 05:00	67.2	67.6	66.1	66.8	66.5	66.6	66.3
05:00 - 06:00	66.5	67.4	66.7	66.3	66.6	66.5	66.4
06:00 - 07:00	67.1	66.8	66.1	66.7	66.7	66.5	66.6
07:00 - 08:00	67.1	67.6	66.8	66.7	66.4	66.5	66.7
08:00 - 09:00	67.3	67.6	66.8	66.7	66.4	66.2	65.8
09:00 - 10:00	67.4	67.0	66.0	67.0	66.5	66.3	66.2
L90(avg)*	66.9	67.5	67.0	66.8	66.5	66.5	66.3

Remark : * Average time between 10:00-10:00

Ladawan W.

(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-PTTGC4

Location : Gate of PTTGC Branch 8 Aromatics **Monitor Period :** 01-08 Feb 2023
SLM Model : RION NL-21 **Serial No :** 00187511
Site Operator : Mr. Siwanon Kulawong

Calibrator Model : RION NC-74 **Serial No :** 34283648
Calibration Ref dB(A) : 94.0 **Certified Date :** 13 Jan 2023
SLM Reading / Adjust dB(A) : 93.8/0.2 **Expire Date :** 12 Jan 2024
Cal Sheet No.: NC-74-2023-009

Time	Equivalent Sound Pressure Level (dB(A))						
	01-02 Feb 2023	02-03 Feb 2023	03-04 Feb 2023	04-05 Feb 2023	05-06 Feb 2023	06-07 Feb 2023	07-08 Feb 2023
12:00 - 13:00	69.4	70.4	69.6	69.1	69.6	69.4	69.4
13:00 - 14:00	69.5	70.0	69.8	69.5	69.7	69.5	68.2
14:00 - 15:00	69.9	71.0	70.0	68.9	70.0	69.9	67.9
15:00 - 16:00	69.5	71.5	69.5	69.1	69.9	69.5	67.2
16:00 - 17:00	69.6	71.4	69.5	68.7	69.8	69.6	67.1
17:00 - 18:00	69.9	71.5	69.6	69.1	70.0	69.9	67.0
18:00 - 19:00	70.0	71.3	70.1	68.3	69.9	70.0	69.9
19:00 - 20:00	69.7	71.9	69.5	67.7	69.7	69.7	69.1
20:00 - 21:00	69.0	71.1	69.1	68.2	69.3	69.0	76.7
21:00 - 22:00	68.2	69.2	67.9	68.8	68.5	68.2	70.2
22:00 - 23:00	67.6	68.2	68.5	67.6	68.0	67.6	68.5
23:00 - 00:00	68.4	68.5	71.6	67.9	69.1	68.4	66.6
00:00 - 01:00	67.2	67.1	66.7	68.2	67.3	67.2	67.1
01:00 - 02:00	67.3	66.9	66.9	66.3	66.9	67.3	66.0
02:00 - 03:00	68.4	66.5	66.8	65.8	66.9	68.4	65.1
03:00 - 04:00	67.3	66.0	66.8	66.0	66.5	67.3	65.4
04:00 - 05:00	67.4	66.5	66.7	65.9	66.6	67.4	66.0
05:00 - 06:00	67.9	67.2	67.0	67.0	67.3	67.9	66.2
06:00 - 07:00	68.4	67.7	67.9	67.3	67.8	68.4	66.2
07:00 - 08:00	70.0	69.7	70.0	68.8	69.6	70.0	66.9
08:00 - 09:00	71.0	69.7	69.5	69.7	70.0	71.0	68.5
09:00 - 10:00	69.9	69.8	68.6	67.9	69.0	69.9	70.2
10:00 - 11:00	69.9	69.6	69.6	68.4	69.4	69.9	74.8
11:00 - 12:00	69.9	69.4	69.5	68.4	69.3	69.9	68.3
Leq(24)*	69.1	69.6	69.0	68.2	68.9	69.1	69.4
Ldn	74.5	74.3	74.6	73.7	74.2	74.5	73.8
Lmax **	93.6	94.3	100.9	94.9	96.5	99.8	99.2
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 12:00-12:00

** Maximum Sound Pressure Level between 12:00-12:00

Ladawan N.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-PTTGC4

Location : Gate of PTTGC Branch 8 Aromatics **Monitor Period :** 01-08 Feb 2023
SLM Model : RION NL-21 **Serial No :** 00187511
Site Operator : Mr. Siwanon Kulawong

Calibrator Model : RION NC-74 **Serial No :** 34283648
Calibration Ref dB(A) : 94.0 **Certified Date :** 13 Jan 2023
SLM Reading / Adjust dB(A) : 93.8/0.2 **Expire Date :** 12 Jan 2024
Cal Sheet No.: NC-74-2023-009

Time	L90 (dB(A))						
	01-02 Feb 2023	02-03 Feb 2023	03-04 Feb 2023	04-05 Feb 2023	05-06 Feb 2023	06-07 Feb 2023	07-08 Feb 2023
12:00 - 13:00	67.6	68.9	67.7	67.3	67.9	67.6	64.0
13:00 - 14:00	67.6	68.5	67.8	67.4	67.8	67.6	64.1
14:00 - 15:00	67.5	69.2	67.7	67.1	67.9	67.5	63.4
15:00 - 16:00	67.7	70.0	67.3	67.1	68.0	67.7	63.6
16:00 - 17:00	67.8	70.1	67.5	67.0	68.1	67.8	64.0
17:00 - 18:00	68.0	70.3	68.0	67.0	68.3	68.0	64.1
18:00 - 19:00	67.6	70.2	68.0	65.4	67.8	67.6	65.2
19:00 - 20:00	67.4	70.2	67.7	65.3	67.6	67.4	65.1
20:00 - 21:00	67.0	69.3	67.2	65.3	67.2	67.0	65.5
21:00 - 22:00	66.2	66.6	66.9	66.6	66.6	66.2	65.1
22:00 - 23:00	66.0	66.8	66.8	66.0	66.4	66.0	64.5
23:00 - 00:00	65.9	67.2	66.0	66.2	66.3	65.9	64.5
00:00 - 01:00	65.7	66.4	65.7	66.0	65.9	65.7	64.8
01:00 - 02:00	65.7	66.2	66.3	65.1	65.8	65.7	64.4
02:00 - 03:00	66.8	65.9	66.2	64.8	65.9	66.8	63.9
03:00 - 04:00	66.6	65.5	66.3	64.7	65.8	66.6	64.4
04:00 - 05:00	66.6	65.6	66.1	64.9	65.8	66.6	65.0
05:00 - 06:00	67.1	66.3	66.4	65.9	66.4	67.1	64.8
06:00 - 07:00	66.2	66.6	66.6	65.0	66.2	67.0	65.0
07:00 - 08:00	67.5	66.9	67.1	65.9	66.8	67.5	65.1
08:00 - 09:00	67.6	66.6	66.8	66.4	66.8	67.6	65.9
09:00 - 10:00	67.6	67.6	66.7	65.8	66.9	67.6	66.0
10:00 - 11:00	67.8	67.8	67.0	66.3	67.2	67.8	65.1
11:00 - 12:00	68.0	67.5	67.4	66.5	67.3	68.0	64.6
L90(avg)*	67.2	68.0	67.0	66.1	67.0	67.2	64.7

Remark : * Average time between 12:00-12:00

Ladawan N.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-PTTGC4

Location : Northern Area of PTTGC Branch 8 Aramatics **Monitor Period :** 01-08 Feb 2023
SLM Model : RION NL-21 **Serial No :** 00187497
Site Operator : Mr. Siwanon Kulawong

Calibrator Model : RION NC-74 **Serial No :** 34283648
Calibration Ref dB(A) : 94.0 **Certified Date :** 13 Jan 2023
SLM Reading / Adjust dB(A) : 93.6/0.4 **Expire Date :** 12 Jan 2024
Cal Sheet No.: NC-74-2023-009

Time	Equivalent Sound Pressure Level (dB(A))						
	01-02 Feb 2023	02-03 Feb 2023	03-04 Feb 2023	04-05 Feb 2023	05-06 Feb 2023	06-07 Feb 2023	07-08 Feb 2023
11:00 - 12:00	66.9	66.3	65.3	66.9	66.1	67.8	67.0
12:00 - 13:00	66.7	66.5	64.6	66.9	65.8	67.9	67.1
13:00 - 14:00	66.7	66.4	64.7	66.4	64.6	67.9	66.9
14:00 - 15:00	66.7	66.3	65.0	66.8	64.6	66.8	66.7
15:00 - 16:00	66.6	66.3	65.6	66.6	64.9	66.7	65.8
16:00 - 17:00	67.0	66.6	66.4	67.0	65.3	66.6	65.9
17:00 - 18:00	67.2	66.7	65.8	67.8	65.2	66.6	65.8
18:00 - 19:00	67.0	66.5	65.4	67.6	65.5	66.7	66.0
19:00 - 20:00	67.1	67.0	65.6	67.7	66.2	67.4	66.2
20:00 - 21:00	67.1	66.7	65.4	67.5	66.0	67.5	66.9
21:00 - 22:00	66.9	66.5	65.4	67.5	65.7	67.3	66.9
22:00 - 23:00	65.9	66.5	69.4	67.3	65.7	67.4	66.9
23:00 - 00:00	66.3	65.6	65.5	67.2	65.7	67.3	66.8
00:00 - 01:00	67.0	64.8	66.0	66.3	65.7	67.2	66.7
01:00 - 02:00	67.0	65.1	67.0	65.5	65.3	67.0	66.8
02:00 - 03:00	67.1	65.2	66.4	65.3	67.1	66.5	65.8
03:00 - 04:00	67.4	65.2	66.3	65.2	67.2	67.0	68.7
04:00 - 05:00	67.6	65.1	66.5	65.0	67.2	66.9	68.7
05:00 - 06:00	67.3	65.3	66.1	65.2	67.1	66.9	68.7
06:00 - 07:00	67.1	65.2	66.5	65.1	67.1	66.8	68.6
07:00 - 08:00	66.6	65.2	66.6	64.8	67.0	66.8	68.6
08:00 - 09:00	66.8	65.3	66.0	65.9	67.2	67.0	68.7
09:00 - 10:00	66.9	65.2	66.3	65.1	67.0	66.9	68.7
10:00 - 11:00	67.1	65.4	66.8	66.0	67.5	66.9	67.5
Leq(24)*	66.9	65.9	66.1	66.5	66.2	67.1	67.3
Ldn	73.4	71.9	73.1	72.4	72.9	73.4	74.0
Lmax **	82.8	78.7	102.9	79.9	79.3	86.3	80.7
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 11:00-11:00

** Maximum Sound Pressure Level between 11:00-11:00

Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-PTTGC4

Location : Northern Area of PTTGC Branch 8 Aramatics **Monitor Period :** 01-08 Feb 2023
SLM Model : RION NL-21 **Serial No :** 00187497
Site Operator : Mr. Siwanon Kulawong

Calibrator Model : RION NC-74 **Serial No :** 34283648
Calibration Ref dB(A) : 94.0 **Certified Date :** 13 Jan 2023
SLM Reading / Adjust dB(A) : 93.6/0.4 **Expire Date :** 12 Jan 2024
Cal Sheet No.: NC-74-2023-009

Time	L90 (dB(A))						
	01-02 Feb 2023	02-03 Feb 2023	03-04 Feb 2023	04-05 Feb 2023	05-06 Feb 2023	06-07 Feb 2023	07-08 Feb 2023
11:00 - 12:00	66.3	65.7	64.5	66.2	65.2	67.3	66.3
12:00 - 13:00	66.2	65.8	63.7	66.1	64.5	67.4	66.5
13:00 - 14:00	66.1	65.7	63.9	65.7	63.7	66.4	65.9
14:00 - 15:00	66.2	65.6	64.2	65.8	63.7	66.1	65.6
15:00 - 16:00	66.0	65.5	64.5	65.9	63.9	66.0	65.2
16:00 - 17:00	66.5	65.9	65.4	66.0	63.9	66.1	65.2
17:00 - 18:00	66.7	66.2	64.9	67.0	63.9	66.0	65.1
18:00 - 19:00	66.5	66.0	64.5	66.9	64.5	66.0	65.3
19:00 - 20:00	66.6	66.4	64.8	67.0	65.4	66.5	65.5
20:00 - 21:00	66.6	66.1	64.6	66.9	65.2	66.9	66.2
21:00 - 22:00	66.4	66.0	64.6	66.8	65.0	66.8	66.2
22:00 - 23:00	63.9	65.9	64.5	66.6	64.9	66.8	66.2
23:00 - 00:00	63.7	63.3	64.4	66.6	64.9	66.7	66.1
00:00 - 01:00	66.4	63.7	64.2	64.2	64.8	66.6	66.0
01:00 - 02:00	66.5	64.2	65.8	64.4	64.2	66.3	66.0
02:00 - 03:00	66.5	64.3	65.6	64.5	66.6	64.5	63.8
03:00 - 04:00	66.7	64.2	65.7	64.3	66.7	66.4	68.0
04:00 - 05:00	66.9	64.3	65.7	64.2	66.6	66.2	68.0
05:00 - 06:00	66.8	64.3	65.6	64.4	66.5	66.3	68.0
06:00 - 07:00	66.5	64.3	65.7	64.2	66.5	66.2	68.0
07:00 - 08:00	66.0	64.3	65.7	64.1	66.5	66.2	67.9
08:00 - 09:00	66.2	64.4	65.5	64.1	66.4	66.3	67.9
09:00 - 10:00	66.2	64.5	65.6	64.1	66.5	66.2	67.9
10:00 - 11:00	66.0	64.6	66.2	65.1	66.9	66.3	64.4
L90(avg)*	66.2	65.1	65.0	65.6	65.4	66.4	66.5

Remark : * Average time between 11:00-11:00

Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-PTTGC4

Location : Southern Area of PTTGC Branch 8 Aromatics

Monitor Period : 01-08 Feb 2023

SLM Model : RION NL-21

Serial No : 00187489

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : RION NC-74

Serial No : 34283648

Calibration Ref dB(A) : 94.0

Certified Date : 13 Jan 2023

SLM Reading / Adjust dB(A) : 93.8/0.2

Expire Date : 12 Jan 2024

Cal Sheet No.: NC-74-2023-009

Time	Equivalent Sound Pressure Level (dB(A))						
	01-02 Feb 2023	02-03 Feb 2023	03-04 Feb 2023	04-05 Feb 2023	05-06 Feb 2023	06-07 Feb 2023	07-08 Feb 2023
12:00 - 13:00	60.7	64.1	55.5	55.7	57.4	56.6	58.2
13:00 - 14:00	59.6	54.4	55.1	55.1	56.4	56.7	56.7
14:00 - 15:00	58.0	57.1	56.7	55.5	55.3	56.9	58.0
15:00 - 16:00	64.6	59.4	57.0	64.8	55.0	54.7	56.3
16:00 - 17:00	64.8	66.3	56.4	57.1	54.9	56.1	55.2
17:00 - 18:00	60.8	58.1	56.0	57.8	56.3	56.6	60.3
18:00 - 19:00	63.7	61.7	58.6	56.0	54.9	56.0	60.7
19:00 - 20:00	54.4	58.2	58.4	56.9	54.3	56.5	56.8
20:00 - 21:00	57.7	53.8	57.7	55.5	53.7	56.5	57.1
21:00 - 22:00	53.2	53.7	54.0	53.8	53.7	56.4	54.9
22:00 - 23:00	53.0	53.2	53.1	53.3	53.7	56.8	54.5
23:00 - 00:00	52.9	53.4	66.8	53.2	53.2	53.9	53.4
00:00 - 01:00	52.9	53.2	59.5	53.2	53.4	53.3	52.9
01:00 - 02:00	52.5	53.4	52.7	52.8	52.9	53.4	53.2
02:00 - 03:00	52.2	53.4	52.2	52.5	52.9	53.3	53.0
03:00 - 04:00	53.6	53.3	52.3	52.6	53.3	53.1	52.5
04:00 - 05:00	63.0	53.4	52.5	52.5	53.2	53.0	52.3
05:00 - 06:00	63.2	53.0	52.7	52.4	53.3	53.2	52.6
06:00 - 07:00	63.4	53.2	52.4	52.6	54.2	52.8	53.1
07:00 - 08:00	63.5	55.1	54.1	54.2	53.2	52.7	52.2
08:00 - 09:00	63.5	56.7	55.7	54.1	55.1	53.0	52.2
09:00 - 10:00	61.3	58.4	56.2	54.6	56.0	56.8	61.3
10:00 - 11:00	60.3	55.9	58.4	54.6	55.9	56.7	57.6
11:00 - 12:00	58.1	56.9	56.1	56.6	55.5	56.4	55.8
Leq(24)*	60.7	58.2	58.4	56.2	54.7	55.4	56.4
Ldn	66.0	61.4	66.4	60.2	60.1	60.6	60.5
Lmax **	99.7	90.2	99.8	78.3	78.6	90.1	89.2
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 12:00-12:00

** Maximum Sound Pressure Level between 12:00-12:00

Ladawan W.

(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.

(Miss Preeda Somjai)
Technical Management Team

Noise Monitoring Result : Background Noise

MTR-PTTGC4

Location : Southern Area of PTTGC Branch 8 Aromatics

Monitor Period : 01-08 Feb 2023

SLM Model : RION NL-21

Serial No : 00187489

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : RION NC-74

Serial No : 34283648

Calibration Ref dB(A) : 94.0

Certified Date : 13 Jan 2023

SLM Reading / Adjust dB(A) : 93.8/0.2

Expire Date : 12 Jan 2024

Cal Sheet No.: NC-74-2023-009

Time	L90 (dB(A))						
	01-02 Feb 2023	02-03 Feb 2023	03-04 Feb 2023	04-05 Feb 2023	05-06 Feb 2023	06-07 Feb 2023	07-08 Feb 2023
12:00 - 13:00	54.2	53.2	53.2	53.4	53.2	53.9	53.5
13:00 - 14:00	55.9	52.9	53.2	53.5	53.5	54.5	53.4
14:00 - 15:00	54.9	54.1	53.7	53.1	53.4	54.3	53.7
15:00 - 16:00	56.0	54.5	54.3	63.6	53.6	53.4	53.0
16:00 - 17:00	54.8	54.3	54.0	54.2	53.6	53.8	52.8
17:00 - 18:00	54.3	54.3	54.1	54.4	53.6	54.7	53.7
18:00 - 19:00	54.1	54.1	54.2	54.5	53.7	54.5	57.7
19:00 - 20:00	53.3	53.6	54.2	53.8	52.9	54.6	53.8
20:00 - 21:00	53.0	52.8	53.2	53.6	52.3	53.8	53.9
21:00 - 22:00	52.6	52.7	52.6	52.9	52.7	54.0	53.1
22:00 - 23:00	52.2	52.5	52.1	52.3	52.6	53.1	53.1
23:00 - 00:00	52.3	52.5	53.2	52.3	52.5	52.7	52.0
00:00 - 01:00	52.3	52.6	53.3	52.4	52.6	52.5	51.8
01:00 - 02:00	51.9	52.7	51.9	52.0	52.2	52.5	52.0
02:00 - 03:00	51.5	52.6	51.6	51.8	52.2	52.5	52.0
03:00 - 04:00	51.4	52.6	51.6	52.0	52.6	52.4	51.7
04:00 - 05:00	62.1	52.4	51.5	51.6	52.5	52.3	51.6
05:00 - 06:00	62.3	52.3	51.1	51.8	52.7	52.4	51.9
06:00 - 07:00	62.5	52.5	51.0	51.9	52.6	52.2	51.9
07:00 - 08:00	62.4	53.2	51.8	52.1	52.4	52.0	51.5
08:00 - 09:00	62.3	53.9	53.0	52.1	52.3	52.3	51.4
09:00 - 10:00	53.2	54.2	53.3	52.5	52.9	52.8	52.0
10:00 - 11:00	54.1	53.8	53.7	52.3	53.7	54.7	53.2
11:00 - 12:00	55.1	53.5	53.3	52.5	53.4	54.3	52.9
L90(avg)*	57.4	53.3	53.0	54.5	52.9	53.4	53.1

Remark : * Average time between 12:00-12:00

Ladawan W.

(Miss Ladawan Wongcharoen)
Environmental Scientist

Preeda S.

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-PTTGC4

Location : Western Area of PTTGC Branch 8 Aromatics
SLM Model : RION NL-21
Site Operator : Mr. Siwanon Kulawong

Monitor Period : 01-08 Feb 2023

Serial No : 00187505

Calibrator Model : RION NC-74
Calibration Ref dB(A) : 94.0
SLM Reading / Adjust dB(A) : 93.8/0.2
Cal Sheet No.: NC-74-2023-009

Serial No : 34283648
Certified Date : 13 Jan 2023
Expire Date : 12 Jan 2024

Time	Equivalent Sound Pressure Level (dB(A))						
	01-02 Feb 2023	02-03 Feb 2023	03-04 Feb 2023	04-05 Feb 2023	05-06 Feb 2023	06-07 Feb 2023	07-08 Feb 2023
11:00 - 12:00	59.9	64.8	66.3	66.2	65.2	67.0	65.5
12:00 - 13:00	59.0	56.7	57.3	57.0	71.9	67.1	68.3
13:00 - 14:00	66.9	62.6	62.0	62.5	58.9	67.6	65.0
14:00 - 15:00	67.0	70.0	66.5	66.8	61.7	59.3	58.3
15:00 - 16:00	65.4	78.2	73.4	67.7	70.3	62.2	59.2
16:00 - 17:00	64.3	76.2	72.1	66.0	72.4	69.0	65.6
17:00 - 18:00	61.7	63.7	68.1	67.4	63.5	73.7	66.2
18:00 - 19:00	62.2	63.2	63.7	64.8	59.2	76.4	65.8
19:00 - 20:00	66.1	65.5	65.9	62.0	57.7	70.4	65.3
20:00 - 21:00	65.5	65.0	65.7	62.5	58.6	64.4	62.6
21:00 - 22:00	64.8	64.2	64.9	64.7	58.1	65.6	62.2
22:00 - 23:00	64.5	63.7	65.8	64.6	58.1	63.3	61.5
23:00 - 00:00	64.5	63.3	66.1	59.3	59.9	61.0	60.7
00:00 - 01:00	64.6	63.0	60.0	59.1	59.9	60.1	60.3
01:00 - 02:00	64.3	63.2	60.0	59.6	60.0	60.0	59.9
02:00 - 03:00	64.1	63.5	58.7	59.8	58.4	60.2	58.6
03:00 - 04:00	63.4	63.2	56.5	58.7	57.5	60.4	57.1
04:00 - 05:00	63.3	63.2	56.3	57.2	57.5	59.2	57.3
05:00 - 06:00	63.2	63.2	56.1	57.2	57.5	59.1	57.4
06:00 - 07:00	58.0	62.6	56.1	57.0	57.3	58.6	57.8
07:00 - 08:00	64.2	61.7	57.8	56.7	57.2	58.4	57.7
08:00 - 09:00	67.2	62.7	61.6	57.8	56.8	58.3	57.5
09:00 - 10:00	67.2	66.2	67.2	64.2	59.6	58.4	56.6
10:00 - 11:00	66.0	65.4	67.2	76.9	65.0	62.3	60.5
Leq(24)*	64.6	68.4	65.9	66.1	64.4	67.1	62.6
Ldn	70.3	71.5	69.3	68.6	67.1	69.5	66.7
Lmax **	92.4	94.5	105.6	93.0	93.9	94.5	88.9
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 11:00-11:00

** Maximum Sound Pressure Level between 11:00-11:00

Ladawan N.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist

Preeda S.
 (Miss Preeda Somjai)
 Technical Management Team



Noise Monitoring Result : Background Noise

MTR-PTTGC4

Location : Western Area of PTTGC Branch 8 Aromatics
SLM Model : RION NL-21
Site Operator : Mr. Siwanon Kulawong

Monitor Period : 01-08 Feb 2023

Serial No : 00187505

Calibrator Model : RION NC-74
Calibration Ref dB(A) : 94.0
SLM Reading / Adjust dB(A) : 93.8/0.2
Cal Sheet No.: NC-74-2023-009

Serial No : 34283648
Certified Date : 13 Jan 2023
Expire Date : 12 Jan 2024

Time	L90 (dB(A))						
	01-02 Feb 2023	02-03 Feb 2023	03-04 Feb 2023	04-05 Feb 2023	05-06 Feb 2023	06-07 Feb 2023	07-08 Feb 2023
11:00 - 12:00	56.1	58.5	59.0	59.5	63.4	64.7	63.6
12:00 - 13:00	56.0	56.1	56.0	55.9	63.0	64.8	64.8
13:00 - 14:00	64.4	58.0	57.7	58.5	58.0	62.5	62.6
14:00 - 15:00	64.1	65.4	64.2	65.2	58.4	57.5	56.3
15:00 - 16:00	63.5	64.8	64.4	65.5	64.0	58.4	56.4
16:00 - 17:00	62.3	64.0	63.0	64.1	63.5	65.6	62.8
17:00 - 18:00	60.0	61.4	61.9	64.9	59.7	65.9	64.2
18:00 - 19:00	60.6	59.9	61.2	62.1	58.1	65.8	64.1
19:00 - 20:00	65.3	64.9	65.2	61.0	56.9	62.3	63.5
20:00 - 21:00	64.8	64.4	64.9	61.8	57.9	61.7	61.7
21:00 - 22:00	64.4	63.7	63.3	61.2	57.2	62.4	61.0
22:00 - 23:00	64.2	63.4	63.1	59.8	57.1	60.1	60.7
23:00 - 00:00	64.3	63.0	57.6	58.4	59.5	58.0	58.8
00:00 - 01:00	64.4	62.6	59.6	57.0	59.5	59.7	59.0
01:00 - 02:00	64.1	62.9	59.6	59.3	59.6	59.5	59.3
02:00 - 03:00	63.5	63.3	56.6	59.4	57.2	59.5	56.7
03:00 - 04:00	63.2	63.0	56.1	56.9	57.0	60.1	56.7
04:00 - 05:00	63.1	63.0	55.9	56.8	57.0	58.3	56.7
05:00 - 06:00	62.9	63.0	55.8	56.8	57.0	58.6	56.8
06:00 - 07:00	55.7	62.4	55.7	56.6	56.8	57.8	57.2
07:00 - 08:00	56.5	55.2	55.8	56.2	56.8	57.5	57.2
08:00 - 09:00	61.7	56.4	57.1	56.1	56.0	57.6	56.7
09:00 - 10:00	64.7	63.4	63.8	57.4	57.7	56.8	56.1
10:00 - 11:00	64.1	63.4	65.1	64.7	61.2	57.9	56.4
L90(avg)*	63.0	62.7	61.5	61.0	59.6	61.6	60.7

Remark : * Average time between 11:00-11:00

Ladawan N.
 (Miss Ladawan Wongcharoen)
 Environmental Scientist

Preeda S.
 (Miss Preeda Somjai)
 Technical Management Team

ภาคผนวก ง.6

ใบรับรองผลการตรวจวัดระดับเสียงเฉลี่ย 8 ชั่วโมง (Leq 8 hr)




Noise Monitoring Result : Working Noise MTR-PTTGC 4


Location : Gate House B	Monitor Period : May 23, 2023
SLM Model : Cirrus CR162B	Serial No : G302738
Site Operator : Mr.Chanapon Oakkharaplon	
Calibrator Model : Cirrus CR:515	Serial No : 94296
Calibration Ref dB(A) : 94.0	Certified Date : Dec 20, 2022
SLM Reading / Adjust dB(A) : 93.7/0.0	Expire Date : Dec 19, 2023
Cal Sheet No.: CR-515-2023-066	

Time	Equivalent Sound Pressure Level (dB(A))
	May 23, 2023
00:00 - 01:00	
01:00 - 02:00	
02:00 - 03:00	
03:00 - 04:00	
04:00 - 05:00	
05:00 - 06:00	
06:00 - 07:00	
07:00 - 08:00	
08:00 - 09:00	
09:00 - 10:00	66.4
10:00 - 11:00	66.1
11:00 - 12:00	66.4
12:00 - 13:00	66.7
13:00 - 14:00	66.2
14:00 - 15:00	66.1
15:00 - 16:00	66.1
16:00 - 17:00	71.1
17:00 - 18:00	
18:00 - 19:00	
19:00 - 20:00	
20:00 - 21:00	
21:00 - 22:00	
22:00 - 23:00	
23:00 - 24:00	
Leq(8)*	67.3
Lmax **	103.2
Standard-8Hr	90 dB(A)
Standard-Max	140 dB(A)

Remark : * Average time between 09:00-17:00

** Maximum Sound Pressure Level between 09:00-17:00


(Miss Katesarin Vorradetwittaya)
Environmental Scientist


(Miss Sununta Sirawuttinanon)
Technical Management Team



Noise Monitoring Result : Working Noise MTR-PTTGC 4


Location : Pump Station	Monitor Period : May 25, 2023
SLM Model : Cirrus CR162B	Serial No : G302740
Site Operator : Mr.Chanapon Oakkharaplon	
Calibrator Model : Cirrus CR:515	Serial No : 94296
Calibration Ref dB(A) : 94.0	Certified Date : Dec 20, 2022
SLM Reading / Adjust dB(A) : 93.7/0.0	Expire Date : Dec 19, 2023
Cal Sheet No.: CR-515-2023-067	

Time	Equivalent Sound Pressure Level (dB(A))
	May 25, 2023
00:00 - 01:00	
01:00 - 02:00	
02:00 - 03:00	
03:00 - 04:00	
04:00 - 05:00	
05:00 - 06:00	
06:00 - 07:00	
07:00 - 08:00	
08:00 - 09:00	
09:00 - 10:00	83.1
10:00 - 11:00	83.2
11:00 - 12:00	83.3
12:00 - 13:00	83.4
13:00 - 14:00	83.3
14:00 - 15:00	83.3
15:00 - 16:00	83.2
16:00 - 17:00	83.4
17:00 - 18:00	
18:00 - 19:00	
19:00 - 20:00	
20:00 - 21:00	
21:00 - 22:00	
22:00 - 23:00	
23:00 - 24:00	
Leq(8)*	83.3
Lmax **	85.1
Standard-8Hr	90 dB(A)
Standard-Max	140 dB(A)

Remark : * Average time between 09:00-17:00

** Maximum Sound Pressure Level between 09:00-17:00


(Miss Katesarin Vorradetwittaya)
Environmental Scientist


(Miss Sununta Sirawuttinanon)
Technical Management Team



Noise Monitoring Result : Working Noise

MTR-PTTGC 4

Location : Truck Loading I-17 Monitor Period : May 25, 2023
 SLM Model : Cirrus CR162B Serial No : G302738
 Site Operator : Mr.Chanapon Oakkharaplon

Calibrator Model : Cirrus CR:515 Serial No : 94296
 Calibration Ref dB(A) : 94.0 Certified Date : Dec 20, 2022
 SLM Reading / Adjust dB(A) : 93.7/0.0 Expire Date : Dec 19, 2023
 Cal Sheet No.: CR-515-2023-067

Time	Equivalent Sound Pressure Level (dB(A))	
	May 25, 2023	
00:00 - 01:00		
01:00 - 02:00		
02:00 - 03:00		
03:00 - 04:00		
04:00 - 05:00		
05:00 - 06:00		
06:00 - 07:00		
07:00 - 08:00		
08:00 - 09:00		
09:00 - 10:00	64.2	
10:00 - 11:00	65.2	
11:00 - 12:00	75.9	
12:00 - 13:00	72.8	
13:00 - 14:00	64.8	
14:00 - 15:00	61.2	
15:00 - 16:00	61.2	
16:00 - 17:00	61.5	
17:00 - 18:00		
18:00 - 19:00		
19:00 - 20:00		
20:00 - 21:00		
21:00 - 22:00		
22:00 - 23:00		
23:00 - 24:00		
Leq(8)*	69.5	
Lmax **	94.1	
Standard-8Hr	90 dB(A)	
Standard-Max	140 dB(A)	

Remark : * Average time between 09:00-17:00

** Maximum Sound Pressure Level between 09:00-17:00

(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

(Miss Sununta Sirawuttinanon)
 Technical Management Team

ภาคผนวก ง.7

ใบรับรองผลการตรวจวัดระดับเสียงที่ถูกรับ
เฉลี่ยตลอดระยะเวลาการทำงาน (TWA)



บริษัท ซีคอต

SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพฯ 10800

239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND

TEL : +66(0) 2959-3600 FAX : +66(0) 2959-3535 E-mail : envserv@secot.co.th

NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME	: PTT Global Chemical Public Co.,Ltd.	REFERENCE NO.	: 223096MON1H/Ns Dose-Feb
	(Branch 8 : Tank Farm)		
MEASUREMENT BY	: SECOT Co.,Ltd.	INSTRUMENT	: Noise Dosimeter
MEASUREMENT DATE	: 07/02/2023	CALIBRATOR TYPE	: Cirrus/ RC:110A
MEASUREMENT LOCATION	: PTTGC8 Plant	SERIAL NO.	: 95168
SITE OPERATOR	: Ms. Salisa Ainree	CALIBRATOR REF.	: 114 dB @ 1,000 Hz

USER NAME	AREA	TIME	SOUND PRESSURE LEVEL (dB(A))		
			TWA (12-hr)	% DOSE	STANDARD*
ID : 26002640	Tank Farm	09:02-17:02	64.0	1.2	83.0
ID : 26002626	Loading area	09:02-17:02	63.6	1.1	83.0

Ladawan N.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Sununta Sirawuttinanon
(Miss Sununta Sirawuttinanon)
Technical Management Team

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. * Notification of the Department of Labour Protection and Welfare B.E.2561 (2018).
 4. TWA means Time Weighted Average.



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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME	: PTT Global Chemical Public Co.,Ltd.	REFERENCE NO.	: 223096MON1H/Ns Dose-Feb
	(Branch 4 : Aromatics 1 Plant)		
MEASUREMENT BY	: SECOT Co.,Ltd.	INSTRUMENT	: Noise Dosimeter
MEASUREMENT DATE	: 08/02/2023	CALIBRATOR TYPE	: Cirrus/ RC:110A, Pulsar/ 22R
MEASUREMENT LOCATION	: PTTGC4 Plant	SERIAL NO.	: 95168, 79781
SITE OPERATOR	: Miss Wiraya Patchimboon	CALIBRATOR REF.	: 114 dB @ 1,000 Hz

USER NAME	AREA	TIME	SOUND PRESSURE LEVEL (dB(A))		
			TWA (12-hr)	% DOSE	STANDARD*
ID : 26002422	Reformer 1	08:00-19:04	78.0	29.9	83.0
ID : 26002047	Reformer 2	08:07-19:00	82.2	78.8	83.0
ID : 26009122	Aromatics 1	08:00-19:00	82.1	77.2	83.0
ID : 26002428	Aromatics 2	08:00-19:00	81.2	61.8	83.0
ID : 26002440	Aromatics 2	08:03-19:00	80.3	50.4	83.0
ID : 26008162	Aromatics 3	08:02-19:00	80.8	57.1	83.0
ID : 26002074	Unit 390	08:00-19:00	76.2	19.7	83.0
ID : 26002408	WWT	08:00-19:00	80.8	56.2	83.0

Ladawan N.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Sununta Sirawuttinanon
(Miss Sununta Sirawuttinanon)
Technical Management Team

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. * Notification of the Department of Labour Protection and Welfare B.E.2561 (2018).
 4. TWA means Time Weighted Average.



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239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพฯ 10800

239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND

TEL : +66(0) 2959-3600 FAX : +66(0) 2959-3535 E-mail : envserv@secot.co.th

NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME	PTT Global Chemical Public Co.,Ltd. (Branch 4 : Aromatics 1 Plant)	REFERENCE NO.	223096MON1H/Ns Dose-Feb
MEASUREMENT BY	SECOT Co.,Ltd.	INSTRUMENT	Noise Dosimeter
MEASUREMENT DATE	17/02/2023	CALIBRATOR TYPE	Cirrus/ RC:110A, Pulsar/ 22R
MEASUREMENT LOCATION	PTTGC4 Plant	SERIAL NO.	95168, 79781
SITE OPERATOR	Miss Wiraya Patchimboon	CALIBRATOR REF.	114 dB @ 1,000 Hz

USER NAME	AREA	TIME	SOUND PRESSURE LEVEL (dB(A))		
			TWA (12-hr)	% DOSE	STANDARD*
ID : 26002469	Reformer 1	07:18-19:00	77.2	24.6	83.0
ID : 26008131	Reformer 2	07:18-19:00	72.3	7.9	83.0
ID : 26001118	Aromatics 1	07:18-19:00	79.4	41.0	83.0
ID : 26001320	Utility	07:17-19:00	73.0	9.5	83.0
ID : 26001047	Workshop	07:17-19:00	71.3	6.3	83.0

Ladawan W.
(Miss Ladawan Wongcharoen)
Environmental Scientist

Suntha Sunthanon
(Miss Suntha Sirawuttinanon)
Technical Management Team

- Remark :
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 3. * Notification of the Department of Labour Protection and Welfare B.E.2561 (2018).
 4. TWA means Time Weighted Average.

ภาคผนวก ง.8

ใบรับรองผลการตรวจวัดคุณภาพอากาศภายในสถานประกอบการ

คุณภาพอากาศภายในสถานประกอบการแบบติดตั้งกับพื้นที่



บริษัท ซีคอต จำกัด
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239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND
TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0194/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 07/02/2023
Address	: No.4, I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Muang Rayong , Rayong 21150	Received Date	: 10/02/2023
		Test Date	: 15/02/2023
Tel/Fax	: 0-3897-2370 / 0-3897-4111	Report Date	: 17/02/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
Loading Area สาขาที่ 8	07/02/2023 09:00-13:00	Benzene	NIOSH 1501/GC FID	< 0.02	ND	1
		Toluene	NIOSH 1501/GC FID	< 0.02	ND	200
		Total xylene	NIOSH 1501/GC FID	< 0.03	0.47	100
		Cyclohexane	NIOSH 1500/GC FID	< 0.01	0.91	300

Analyst By: Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By: Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0835/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 25/05/2023
Address	: No.4, I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Muang Rayong , Rayong 21150	Received Date	: 26/05/2023
		Test Date	: 01/06/2023
Tel/Fax	: 0-3897-2370 / 0-3897-4111	Report Date	: 12/06/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
Loading Area สาขาที่ 8	25/05/2023 09:40-13:00	Benzene	NIOSH 1501/GC FID	< 0.02	ND	1
		Toluene	NIOSH 1501/GC FID	< 0.02	ND	200
		Total xylene	NIOSH 1501/GC FID	< 0.03	ND	100
		Cyclohexane	NIOSH 1500/GC FID	< 0.01	ND	300

Analyst By: Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By: Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

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TEL. (662) 959-3600 FAX (662) 959-3535 Website: secot.co.th E-mail: envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0195/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 07/02/2023
Address	: No.4, I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Muang Rayong , Rayong 21150	Received Date	: 10/02/2023
		Test Date	: 13/02/2023
Tel/Fax	: 0-3897-2370 / 0-3897-4111	Report Date	: 17/02/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Passive Diffusion
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
ID : 26004927	07/02/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area : Reformer 1	10:00-14:00	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100
		Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area: Reformer 2	09:56-13:56	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100
		Benzene	OSHA 1005/GC FID	< 0.04	ND	1
ID : 26001158	07/02/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
		Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100
ID : 26008131	07/02/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
		Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100

Analyst By: Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By: Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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TEL. (662) 959-3600 FAX (662) 959-3535 Website: secot.co.th E-mail: envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0195/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 07/02/2023
Address	: No.4, I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Muang Rayong , Rayong 21150	Received Date	: 10/02/2023
		Test Date	: 13/02/2023
Tel/Fax	: 0-3897-2370 / 0-3897-4111	Report Date	: 17/02/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Passive Diffusion
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
ID : 26002420	07/02/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area : Aromatics 1	09:35-13:35	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100
		Benzene	OSHA 1005/GC FID	< 0.04	ND	1
ID : 26009122	07/02/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
		Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100
ID : 26002436	07/02/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
		Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100
ID : 26002440	07/02/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
		Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100
ID : 26002428	07/02/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
		Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100

Analyst By: Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By: Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0195/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 07/02/2023
Address	: No.4, I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong 21150	Received Date	: 10/02/2023
		Test Date	: 13/02/2023
Tel/Fax	: 0-3897-2370 / 0-3897-4111	Report Date	: 17/02/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Passive Diffusion
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
ID : 26002418	07/02/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area: Unit 390	10:21-14:21	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100

Analyst By : Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By : Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0195/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 07/02/2023
Address	: No.4, I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Muang Rayong , Rayong 21150	Received Date	: 10/02/2023
		Test Date	: 13/02/2023
Tel/Fax	: 0-3897-2370 / 0-3897-4111	Report Date	: 17/02/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Passive Diffusion
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
ID : 26005507	07/02/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area: Water treatment	10:10-14:10	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100

Analyst By : Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By : Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0195/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 07/02/2023
Address	: No.4, I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Muang Rayong , Rayong 21150	Received Date	: 10/02/2023
		Test Date	: 13/02/2023
Tel/Fax	: 0-3897-2370 / 0-3897-4111	Report Date	: 17/02/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Passive Diffusion
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
ID : 26001407	07/02/2023	Cyclohexane	ISO 16200-2/GC FID	< 0,04	ND	300
Area : Cyclohexane	10:27-14:27					

Analyst By : Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By : Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0302/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 17/02/2023
Address	: No.4, I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Muang Rayong , Rayong 21150	Received Date	: 28/02/2023
		Test Date	: 03/03/2023
Tel/Fax	: 0-3897-2370 / 0-3897-4111	Report Date	: 09/03/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Passive Diffusion
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
ID : 26002116	17/02/2023	Benzene	OSHA 1005/GC FID	< 0,04	0,16	1
Area : Aromatics 2	07:20-19:20	Toluene	OSHA 111/GC FID	< 0,04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0,08	ND	100

Analyst By : Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By : Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0468/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 21/03/2023
Address	: No.4, I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Muang Rayong , Rayong 21150	Received Date	: 22/03/2023
		Test Date	: 23/03/2023
Tel/Fax	: 0-3897-2370 / 0-3897-4111	Report Date	: 31/03/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Passive Diffusion
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
ID : 26002467	21/03/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area : Reformer 1	08:10-12:10	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100

Analyst By : Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By : Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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TEL. (662) 959-3600 FAX (662) 959-3535 Website: secot.co.th E-mail: envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0468/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 21/03/2023
Address	: No.4, I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Muang Rayong , Rayong 21150	Received Date	: 22/03/2023
		Test Date	: 23/03/2023
Tel/Fax	: 0-3897-2370 / 0-3897-4111	Report Date	: 31/03/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Passive Diffusion
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
ID : 26002440	21/03/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area : Aromatics 2	08:15-12:15	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100

Analyst By : Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By : Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0836/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 23/05/2023
Address	: No.4, I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Muang Rayong , Rayong 21150	Received Date	: 26/05/2023
		Test Date	: 01-02/06/2023
Tel/Fax	: 0-3897-2370 / 0-3897-4111	Report Date	: 08/06/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Passive Diffusion
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
ID : 26008131	23/05/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area : Reformer 1	09:43-13:43	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100
ID : 26002047	23/05/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area : Reformer 2	09:34-13:34	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100
ID : 26001221	23/05/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area : Reformer 2	09:45-13:45	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100
ID : 26002469	23/05/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area : Reformer 2	09:48-13:48	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100

Analyst By : Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By : Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800

239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND

TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0836/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 24/05/2023
Address	: No.4, I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Muang Rayong , Rayong 21150	Received Date	: 26/05/2023
		Test Date	: 01-02/06/2023
Tel/Fax	: 0-3897-2370 / 0-3897-4111	Report Date	: 08/06/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Passive Diffusion
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
ID : 26002116	24/05/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area : Aromatics 1	09:09-13:09	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100
ID : 26002083	24/05/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area : Aromatics 1	09:06-13:06	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100
ID : 26009138	24/05/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area : Aromatics 2	09:04-13:04	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100
ID : 26002413	24/05/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area : Aromatics 2	09:10-13:10	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100
ID : 26002080	24/05/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area : Aromatics 3	09:08-13:08	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100
ID : 26002440	24/05/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area : Aromatics 3	09:05-13:05	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0836/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 23/05/2023
Address	: No.4, I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong 21150	Received Date	: 26/05/2023
		Test Date	: 01-02/06/2023
Tel/Fax	: 0-3897-2370 / 0-3897-4111	Report Date	: 08/06/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Passive Diffusion
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
ID : 26006934	23/05/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area: Water treatment	09:06-13:06	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0836/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 23/05/2023
Address	: No.4, I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong 21150	Received Date	: 26/05/2023
		Test Date	: 01-02/06/2023
Tel/Fax	: 0-3897-2370 / 0-3897-4111	Report Date	: 08/06/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Passive Diffusion
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
ID : 26006582	23/05/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area: Unit 390	09:53-13:53	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0836/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 23/05/2023
Address	: No.4, I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong 21150	Received Date	: 26/05/2023
		Test Date	: 01-02/06/2023
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SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Passive Diffusion
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
ID : 26002016	23/05/2023	Cyclohexane	ISO 16200-2/GC FID	< 0.04	ND	300
Area : Cyclohexane	09:18-13:18					

Analyst By :

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Approved By

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0917/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 07/06/2023
Address	: No.4, I-2 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong 21150	Received Date	: 08/06/2023
		Test Date	: 09-10/06/2023
Tel/Fax	: 0-3897-2370 / 0-3897-4111	Report Date	: 20/06/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Passive Diffusion
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
ID : 26005279	07/06/2023	Benzene	OSHA 1005/GC FID	< 0.04	0.54	I
Area : Reformer 1	09:00-13:00	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100

Analyst By :

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0917/66
For	: PTT Global Chemical Public Co., Ltd. (Branch 4 :Aromatics 1 Plant)	Sampling Date	: 07/06/2023
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SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Passive Diffusion
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
ID : 26008162	07/06/2023	Benzene	OSHA 1005/GC FID	< 0.04	ND	1
Area : Aromatics 3	09:10-13:10	Toluene	OSHA 111/GC FID	< 0.04	ND	200
		Total xylene	OSHA 1002/GC FID	< 0.08	ND	100

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