

ภาคผนวก ง

ใบรับรองผลการตรวจวัดและวิเคราะห์

## คุณภาพอากาศในบรรยากาศ

---



# บริษัท ซีคอต จำกัด SECOT CO., LTD.

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

## AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd, Branch 6 REQUEST SERVICE No. : I204/68  
(Refinery GC 6) SAMPLING METHOD : Subatmospheric Pressure Sampling  
SAMPLING BY : SECOT Co., Ltd. ANALYTICAL DATE : 11/07/2025  
SAMPLING DATE : 01-02/07/2025 SAMPLE CONDITION : Normal  
SAMPLING TIME : 12:20-11:45 FILE CODE : 225010\_TO-15\_July  
RECEIVED DATE : 03/07/2025  
REPORT DATE : 11/07/2025

Compound	SAMPLING LOCATION				STANDARD* (µg/m <sup>3</sup> )
	Non Detection		Takuan-Ao Pradu Community 1		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
Benzene	0.004 <sup>a</sup>	0.013	0.73	2.33	7.6

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15.1999

*Siriwan Chimsa-nga*  
(Miss Siriwan Chimsa-nga)

Analyst

*NT*  
(Mrs. Areya Tipparak)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18,B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).

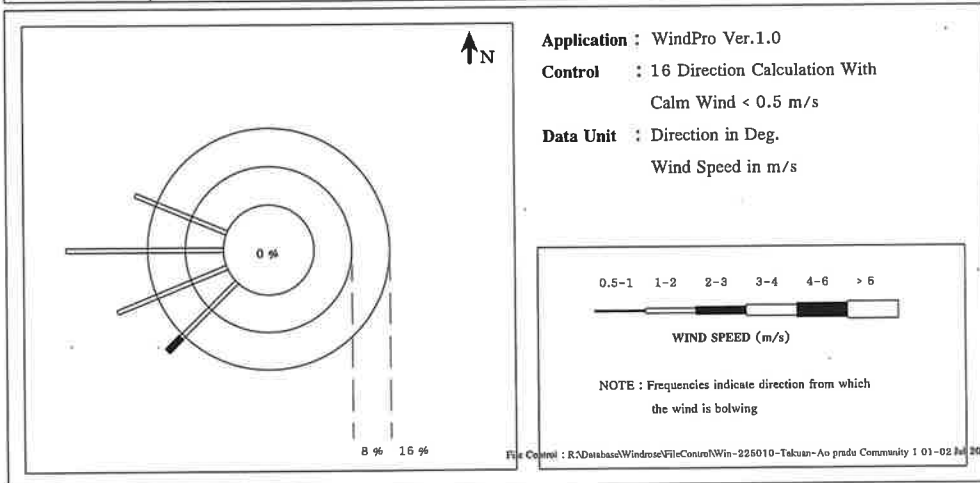
R:\Database\Windrose\FileControl\Win-225010-Takuan-Ao pradu Community 1 01-02 Jul 2025



## Meteorological Monitoring Results : Wind Rose MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 1 Monitor period : 01-02 Jul 2025  
Wind Speed Model : NRG Symphonie Serial No : 309012643  
Wind Direction Model : NRG Symphonie Serial No : 309012643

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ESE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SW	0.0000	0.1667	0.0417	0.0000	0.0000	0.0000	0.2083
WSW	0.0000	0.2500	0.0000	0.0000	0.0000	0.0000	0.2500
W	0.0000	0.3333	0.0000	0.0000	0.0000	0.0000	0.3333
WNW	0.0000	0.2083	0.0000	0.0000	0.0000	0.0000	0.2083
NW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.0000						



*Katesarin Vorradetwittaya*  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

*Preeda S.*  
(Miss Preeda Somjai)  
Technical Management Team



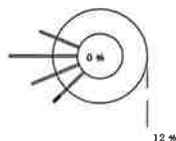
## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 1      Monitor period : 01-02 Jul 2025  
 Wind Speed Model : NRG Symphonie      Serial No : 309012643  
 Wind Direction Model : NRG Symphonie      Serial No : 309012643

Time	01-02 Jul 2025	
	WS(m/s)	WD
12:00 - 13:00	1.2	W
13:00 - 14:00	1.5	WSW
14:00 - 15:00	1.1	W
15:00 - 16:00	1.2	WNW
16:00 - 17:00	1.6	SW
17:00 - 18:00	1.1	W
18:00 - 19:00	1.4	WSW
19:00 - 20:00	1.4	SW
20:00 - 21:00	1.0	W
21:00 - 22:00	1.4	W
22:00 - 23:00	1.3	W
23:00 - 24:00	1.3	SW
00:00 - 01:00	1.2	W
01:00 - 02:00	1.3	W
02:00 - 03:00	1.1	WNW
03:00 - 04:00	1.5	WNW
04:00 - 05:00	1.6	WNW
05:00 - 06:00	1.3	SW
06:00 - 07:00	1.2	WNW
07:00 - 08:00	2.0	WSW
08:00 - 09:00	1.9	WSW
09:00 - 10:00	2.1	SW
10:00 - 11:00	1.7	WSW
11:00 - 12:00	1.8	WSW

Wind Rose



File Control :R:\Database\Windrose\FileControl\Win-225010-Takuan-Ao pradu Community 1 01-02 Jul 2025

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## บริษัท ซีคอต จำกัด

### SECOT CO., LTD.

239 ถนนวิมลคลองประปา 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

### AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd, Branch 6      REQUEST SERVICE No. : 1401/68  
 (Refinery GC 6)      SAMPLING METHOD : Subatmospheric Pressure Sampling  
 SAMPLING BY : SECOT Co., Ltd.      ANALYTICAL DATE : 08/08/2025  
 SAMPLING DATE : 01-02/08/2025      SAMPLE CONDITION : Normal  
 SAMPLING TIME : 15:02-15:09      FILE CODE : 225010\_TO-15\_August  
 RECEIVED DATE : 03/08/2025  
 REPORT DATE : 08/08/2025

Compound	Non Detection		SAMPLING LOCATION		STANDARD* (µg/m <sup>3</sup> )
			Takuan-Ao Pradu Community I		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
Benzene	0.004	0.013	0.39	1.25	7.6

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15.1999

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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

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

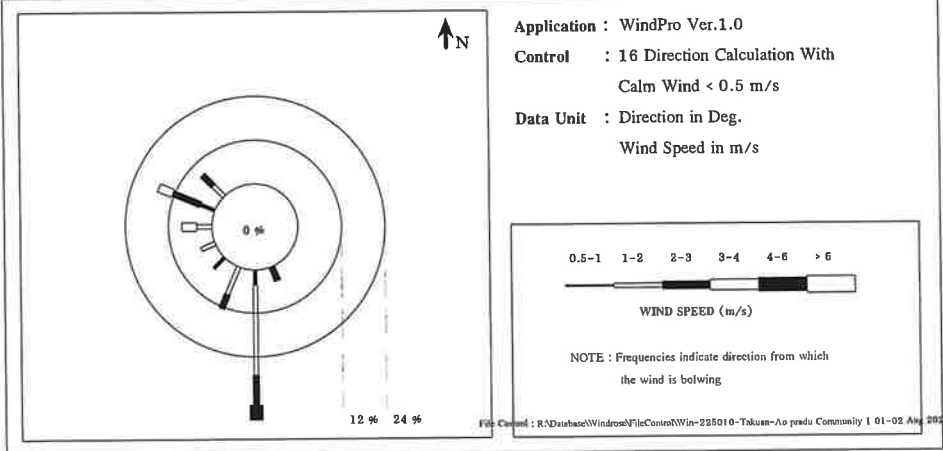
3. \* Notification of the Pollution Control Department, dated December 18,B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



## Meteorological Monitoring Results : Wind Rose MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 1      Monitor period : 01-02 Aug 2025  
Wind Speed Model : Novalynx WS-25      Serial No : A4905  
Wind Direction Model : Novalynx WS-25      Serial No : A4905

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ESE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0000	0.0000	0.0417	0.0000	0.0000	0.0000	0.0417
S	0.0417	0.2500	0.0833	0.0000	0.0417	0.0000	0.4167
SSW	0.0000	0.0833	0.0417	0.0000	0.0000	0.0000	0.1250
SW	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
WSW	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
W	0.0000	0.0417	0.0000	0.0417	0.0000	0.0000	0.0833
WNW	0.0417	0.0000	0.0833	0.0417	0.0000	0.0000	0.1667
NW	0.0000	0.0417	0.0417	0.0000	0.0000	0.0000	0.0833
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.0000						



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team

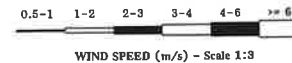
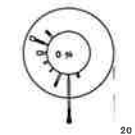


## Meteorological Monitoring Results : Wind Rose MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 1      Monitor period : 01-02 Aug 2025  
Wind Speed Model : Novalynx WS-25      Serial No : A4905  
Wind Direction Model : Novalynx WS-25      Serial No : A4905

Time	01-02 Aug 2025	
	WS(m/s)	WD
15:00 - 16:00	1.2	W
16:00 - 17:00	4.1	S
17:00 - 18:00	1.2	S
18:00 - 19:00	1.1	S
19:00 - 20:00	1.3	SSW
20:00 - 21:00	0.6	S
21:00 - 22:00	2.2	SSW
22:00 - 23:00	2.4	SSE
23:00 - 24:00	2.7	WNW
00:00 - 01:00	2.8	WNW
01:00 - 02:00	2.7	NW
02:00 - 03:00	3.5	WNW
03:00 - 04:00	3.3	W
04:00 - 05:00	0.7	SW
05:00 - 06:00	1.2	S
06:00 - 07:00	1.2	S
07:00 - 08:00	1.8	S
08:00 - 09:00	1.4	S
09:00 - 10:00	0.8	WNW
10:00 - 11:00	1.9	NW
11:00 - 12:00	2.1	S
12:00 - 13:00	1.3	SSW
13:00 - 14:00	2.1	S
14:00 - 15:00	1.9	WSW

Wind Rose



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



# บริษัท ซีคอต จำกัด SECOT CO., LTD.

239 ถนนวิมลทองประไพ 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

## AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC 6)  
REQUEST SERVICE No. : I689/68  
SAMPLING BY : SECOT Co., Ltd.  
SAMPLING METHOD : Subatmospheric Pressure Sampling  
SAMPLING DATE : 04-05/09/2025  
ANALYTICAL DATE : 09/09/2025  
SAMPLING TIME : 10:35-10:10  
SAMPLE CONDITION : Normal  
RECEIVED DATE : 06/09/2025  
FILE CODE : 225010\_TO-15\_September  
REPORT DATE : 11/09/2025

Compound	SAMPLING LOCATION				STANDARD* (µg/m <sup>3</sup> )
	Non Detection		Takuan-Ao Pradu Community 1		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
Benzene	0.004	0.013	0.60	1.92	7.6

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

*Siriwan Chimsa-nga*  
(Miss Siriwan Chimsa-nga)

Analyst

*(Mrs. Araya Tipparuk)*  
(Mrs. Araya Tipparuk)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18,B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).

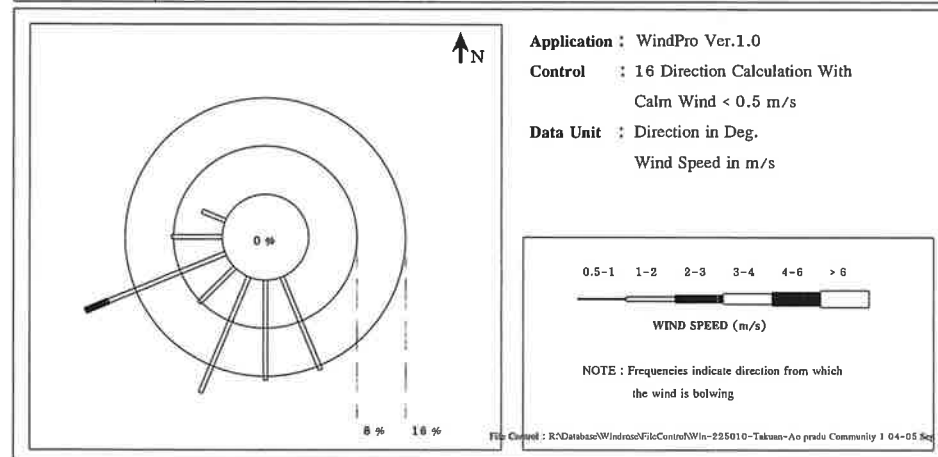
R:\Database\Windrose\FileControlWin-225010-Takuan-Ao pradu Community 1 04-05 Sep 2025



## Meteorological Monitoring Results : Wind Rose MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 1  
Monitor period : 04-05 Sep 2025  
Wind Speed Model : NRG Symphonie  
Serial No : 35262609  
Wind Direction Model : NRG Symphonie  
Serial No : 35262609

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ESE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0000	0.1667	0.0000	0.0000	0.0000	0.0000	0.1667
S	0.0000	0.1667	0.0000	0.0000	0.0000	0.0000	0.1667
SSW	0.0000	0.2083	0.0000	0.0000	0.0000	0.0000	0.2083
SW	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833
WSW	0.0000	0.2083	0.0417	0.0000	0.0000	0.0000	0.2500
W	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833
WNW	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
NW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.0000						



*(Miss Katesarin Vorradetwittaya)*  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

*(Miss Preeda Somjai)*  
(Miss Preeda Somjai)  
Technical Management Team

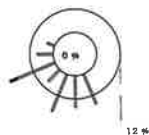


## Meteorological Monitoring Results : Wind Rose MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 1      Monitor period : 04-05 Sep 2025  
Wind Speed Model : NRG Symphonie      Serial No : 35262609  
Wind Direction Model : NRG Symphonie      Serial No : 35262609

Time	04-05 Sep 2025	
	WS(m/s)	WD
10:00 - 11:00	1.6	WSW
11:00 - 12:00	1.4	SW
12:00 - 13:00	1.4	SSW
13:00 - 14:00	1.3	W
14:00 - 15:00	1.6	WSW
15:00 - 16:00	1.3	SSW
16:00 - 17:00	1.5	WSW
17:00 - 18:00	1.8	S
18:00 - 19:00	1.3	W
19:00 - 20:00	1.6	SSE
20:00 - 21:00	1.6	SSW
21:00 - 22:00	1.7	S
22:00 - 23:00	1.4	SSE
23:00 - 24:00	1.7	SW
00:00 - 01:00	1.3	SSW
01:00 - 02:00	1.1	SSW
02:00 - 03:00	1.5	SSE
03:00 - 04:00	1.3	WSW
04:00 - 05:00	2.0	WSW
05:00 - 06:00	1.4	SSE
06:00 - 07:00	1.4	WSW
07:00 - 08:00	1.6	S
08:00 - 09:00	1.5	WNW
09:00 - 10:00	1.1	S

Wind Rose



12 %



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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## บริษัท ซีคอต จำกัด SECOT CO., LTD.

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

### AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd, Branch 6      REQUEST SERVICE No. : 1872/68  
(Refinery GC 6)      SAMPLING METHOD : Subatmospheric Pressure Sampling  
SAMPLING BY : SECOT Co., Ltd.      ANALYTICAL DATE : 08/10/2025  
SAMPLING DATE : 01-02/10/2025      SAMPLE CONDITION : Normal  
SAMPLING TIME : 12:07-11:07      FILE CODE : 225010\_TO-15\_October  
RECEIVED DATE : 03/10/2025  
REPORT DATE : 09/10/2025

Compound	SAMPLING LOCATION				STANDARD* (µg/m <sup>3</sup> )
	Non Detection		Takuan-Ao Pradu Community I		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
Benzene	0.004	0.013	0.45	1.44	7.6

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15,1997

(Miss Siriwan Chimsa-nga)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18, B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



## Meteorological Monitoring Results : Wind Rose MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 1

Monitor period : 01-02 Oct 2025

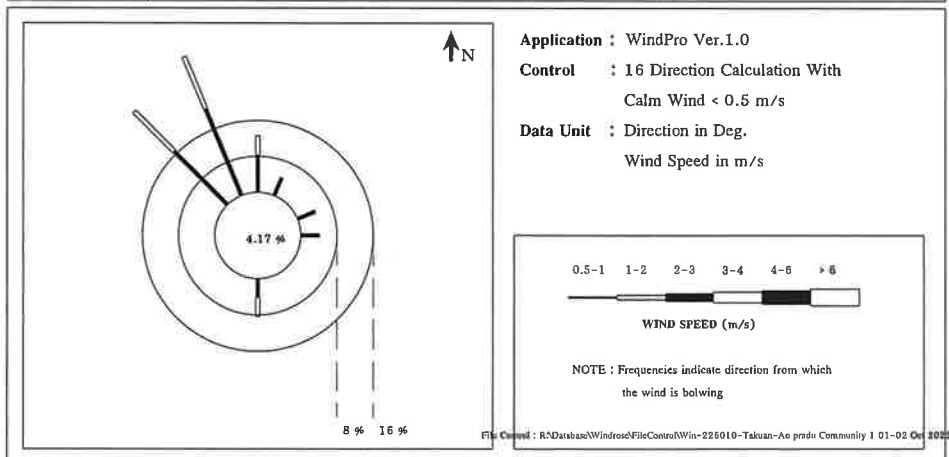
Wind Speed Model : Scarlet WS-21

Serial No : AD:07

Wind Direction Model : Scarlet WS-21

Serial No : AD:07

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	0.0833	0.0417	0.0000	0.0000	0.0000	0.0000	0.1250
NNE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
E	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
ESE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	0.0417	0.0417	0.0000	0.0000	0.0000	0.0000	0.0833
SSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
W	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NW	0.1667	0.1250	0.0000	0.0000	0.0000	0.0000	0.2917
NNW	0.2083	0.1250	0.0000	0.0000	0.0000	0.0000	0.3333
CALM	0.0417						



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 1

Monitor period : 01-02 Oct 2025

Wind Speed Model : Scarlet WS-21

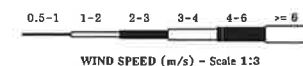
Serial No : AD:07

Wind Direction Model : Scarlet WS-21

Serial No : AD:07

Time	01-02 Oct 2025	
	WS(m/s)	WD
12:00 - 13:00	0.8	E
13:00 - 14:00	1.4	NNW
14:00 - 15:00	0.7	NW
15:00 - 16:00	0.7	ENE
16:00 - 17:00	0.9	NNW
17:00 - 18:00	0.3	NW
18:00 - 19:00	0.5	NW
19:00 - 20:00	1.3	S
20:00 - 21:00	0.9	S
21:00 - 22:00	0.8	NNE
22:00 - 23:00	1.0	N
23:00 - 24:00	0.8	NNW
00:00 - 01:00	0.7	NW
01:00 - 02:00	0.6	NW
02:00 - 03:00	0.8	NNW
03:00 - 04:00	0.8	NNW
04:00 - 05:00	0.6	N
05:00 - 06:00	0.8	NNW
06:00 - 07:00	0.7	N
07:00 - 08:00	1.1	NNW
08:00 - 09:00	1.2	NW
09:00 - 10:00	1.3	NW
10:00 - 11:00	1.3	NNW
11:00 - 12:00	1.0	NW

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-225010-Takuan-Ao pradu Community 1 01-02 Oct 2025

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Preeda Somjai)  
Technical Management Team



# บริษัท ซีคอต จำกัด SECOT CO., LTD.

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

## AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC 6)	REQUEST SERVICE No.	: 2100/68
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 04-05/11/2025	ANALYTICAL DATE	: 07/11/2025
SAMPLING TIME	: 10:13-10:43	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 06/11/2025	FILE CODE	: 225010_TO-15_November
REPORT DATE	: 11/11/2025		

Compound	SAMPLING LOCATION				STANDARD* (µg/m <sup>3</sup> )
	Non Detection		Takuan-Ao Pradu Community 1		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
Benzene	0.004	0.013	0.66	2.11	7.6

Methods for the Determination of Toxic Organic Compound in Ambient Air. 2<sup>nd</sup> : EPA Methods TO-15.1999

*Siriwan Chimsa-nga*  
(Miss Siriwan Chimsa-nga)

Analyst

*(Mrs. Araya Tipparuk)*  
(Mrs. Araya Tipparuk)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18.B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).

R:\Database\Windrose\FileControl\Win-225010-Takuan-Ao pradu Community 1 04-05 Nov 2025



## Meteorological Monitoring Results : Wind Rose MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 1

Monitor period : 04-05 Nov 2025

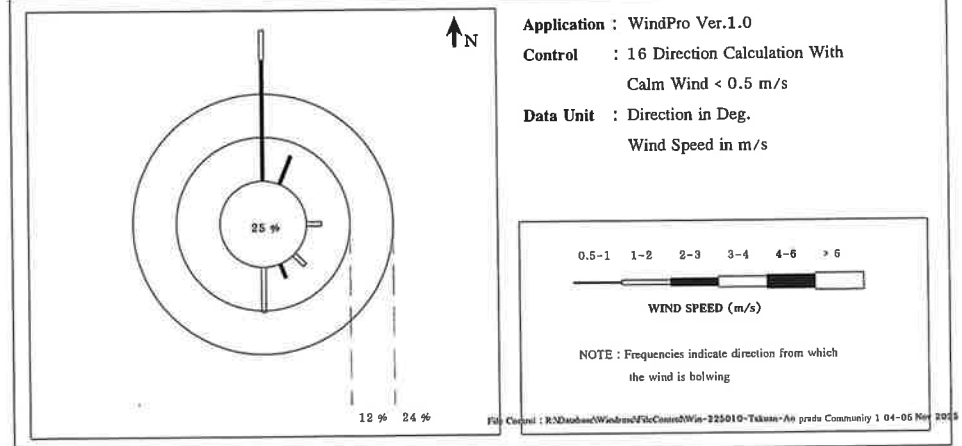
Wind Speed Model : Scarlet WS-21

Serial No : AD:28

Wind Direction Model : Scarlet WS-21

Serial No : AD:28

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	0.3333	0.0833	0.0000	0.0000	0.0000	0.0000	0.4167
NNE	0.0833	0.0000	0.0000	0.0000	0.0000	0.0000	0.0833
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
ESE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
SSE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
S	0.0000	0.1250	0.0000	0.0000	0.0000	0.0000	0.1250
SSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
W	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.2500						



*(Miss Katesarin Vorradetwittaya)*  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

*Preeda S.*  
(Miss Preeda Somjai)  
Technical Management Team

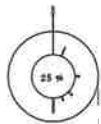


# Meteorological Monitoring Results : Wind Rose MTR-PTTGC6-Refinery

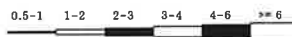
Location : Takuan-Ao pradu Community 1 Monitor period : 04-05 Nov 2025  
Wind Speed Model : Scarlet WS-21 Serial No : AD:28  
Wind Direction Model : Scarlet WS-21 Serial No : AD:28

Time	04-05 Nov 2025	
	WS(m/s)	WD
10:00 - 11:00	0.0	N
11:00 - 12:00	0.9	N
12:00 - 13:00	1.5	SE
13:00 - 14:00	1.8	S
14:00 - 15:00	1.8	S
15:00 - 16:00	1.5	S
16:00 - 17:00	0.9	SSE
17:00 - 18:00	0.1	NE
18:00 - 19:00	0.1	N
19:00 - 20:00	0.1	NNE
20:00 - 21:00	0.0	NE
21:00 - 22:00	0.1	NE
22:00 - 23:00	0.7	NNE
23:00 - 24:00	0.7	N
00:00 - 01:00	0.7	N
01:00 - 02:00	0.9	N
02:00 - 03:00	0.9	N
03:00 - 04:00	0.8	N
04:00 - 05:00	0.6	N
05:00 - 06:00	0.7	NNE
06:00 - 07:00	0.9	N
07:00 - 08:00	1.1	N
08:00 - 09:00	1.2	N
09:00 - 10:00	1.3	E

Wind Rose



20 m/s



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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิมลทองประไพ 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

## AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME

PTT Global Chemical Public Co., Ltd, Branch 6  
(Refinery GC 6)

SAMPLING BY

SECOT Co., Ltd.

SAMPLING DATE

16-17/12/2025

SAMPLING TIME

11:45-11:20

RECEIVED DATE

18/12/2025

REPORT DATE

23/12/2025

REQUEST SERVICE No.

2411/68

SAMPLING METHOD

Subatmospheric Pressure Sampling

ANALYTICAL DATE

22/12/2025

SAMPLE CONDITION

Normal

FILE CODE

225010\_TO-15\_December

RECEIVED DATE	: 23/12/2025				
REPORT DATE	SAMPLING LOCATION				STANDARD*
Compound	Non Detection		Takuan-Ao Pradu Community 1		(µg/m <sup>3</sup> )
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
Benzene	0.004	0.013	0.94	3.00	7.6
Methods for the Determination of Toxic Organic Compound in Ambient Air, 2 <sup>nd</sup> - EPA Method TO-15, 1999					

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> - EPA Methods TO-15.1999

Siriwan Chirsa-nga  
(Miss Siriwan Chirsa-nga)

Analyst

(Mrs. Araya Tipparuk)  
Technical Management Team

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduce, except in full, without official approval.  
3. \* Notification of the Pollution Control Department, dated December 18.B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 1

Monitor period : 16-17 Dec 2025

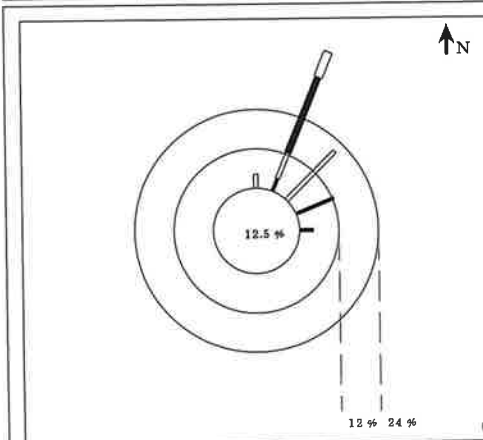
Wind Speed Model : Campbell CR510

Serial No : 10853

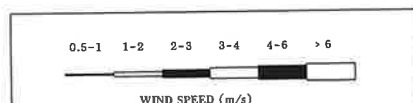
Wind Direction Model : Campbell CR510

Serial No : 10853

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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
NNE	0.0417	0.0833	0.2500	0.0833	0.0000	0.0000	0.4583
NE	0.0000	0.2083	0.0000	0.0000	0.0000	0.0000	0.2083
ENE	0.1250	0.0000	0.0000	0.0000	0.0000	0.0000	0.1250
E	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
ESE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
W	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.1250						



Application : WindPro Ver.1.0

Control : 16 Direction Calculation With  
Calm Wind < 0.5 m/sData Unit : Direction in Deg.  
Wind Speed in m/sNOTE : Frequencies indicate direction from which  
the wind is blowing

*(Signature)*  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

*(Signature)*  
(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 1

Monitor period : 16-17 Dec 2025

Wind Speed Model : Campbell CR510

Serial No : 10853

Wind Direction Model : Campbell CR510

Serial No : 10853

Time	16-17 Dec 2025	
	WS(m/s)	WD
11:00 - 12:00	0.8	ENE
12:00 - 13:00	0.9	ENE
13:00 - 14:00	0.8	E
14:00 - 15:00	0.6	ENE
15:00 - 16:00	0.2	ENE
16:00 - 17:00	0.3	E
17:00 - 18:00	0.4	N
18:00 - 19:00	0.8	NNE
19:00 - 20:00	1.2	NE
20:00 - 21:00	1.1	NE
21:00 - 22:00	1.2	NE
22:00 - 23:00	1.6	NE
23:00 - 24:00	1.5	NNE
00:00 - 01:00	1.6	NE
01:00 - 02:00	1.9	NNE
02:00 - 03:00	2.4	NNE
03:00 - 04:00	2.3	NNE
04:00 - 05:00	2.8	NNE
05:00 - 06:00	2.7	NNE
06:00 - 07:00	3.0	NNE
07:00 - 08:00	3.0	NNE
08:00 - 09:00	2.8	NNE
09:00 - 10:00	2.3	NNE
10:00 - 11:00	1.8	N

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-225010-Takuan-Ao pradu Community 1 16-17 Dec 2025

*(Signature)*  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

*(Signature)*  
(Miss Preeda Somjai)  
Technical Management Team



# บริษัท ซีคอต จำกัด SECOT CO., LTD.

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

## AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd, Branch 6	REQUEST SERVICE No.	: I204/68
	(Refinery GC 6)	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 11/07/2025
SAMPLING DATE	: 01-02/07/2025	SAMPLE CONDITION	: Normal
SAMPLING TIME	: 12:10-11:40	FILE CODE	: 225010_TO-15_July
RECEIVED DATE	: 03/07/2025		
REPORT DATE	: 11/07/2025		

Compound	Non Detection		SAMPLING LOCATION		STANDARD*
			Takuan-Ao Pradu Community 2		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	
Benzene	0.004	0.013	0.32	1.02	7.6

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

*Sirivan Chimsa-ngu*  
(Miss Siriwan Chimsa-ngu)

Analyst

*NR*  
(Mrs. Araya Tipparuk)

Technical Management Team

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

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

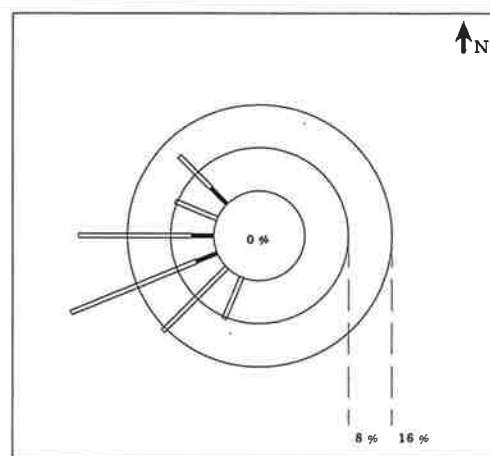
3. \* Notification of the Pollution Control Department, dated December 18,B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



## Meteorological Monitoring Results : Wind Rose MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 2 Monitor period : 01-02 Jul 2025  
Wind Speed Model : NRG Symphonie Serial No : 309016789  
Wind Direction Model : NRG Symphonie Serial No : 309016789

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ESE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSW	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833
SW	0.0000	0.1667	0.0000	0.0000	0.0000	0.0000	0.1667
WSW	0.0417	0.2500	0.0000	0.0000	0.0000	0.0000	0.2917
W	0.0417	0.2083	0.0000	0.0000	0.0000	0.0000	0.2500
WNW	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833
NW	0.0417	0.0833	0.0000	0.0000	0.0000	0.0000	0.1250
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.0000						



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-225010-Takuan-Ao pradu Community 2 01-02 Jul 2025

*(Miss Katesarin Vorradetwittaya)*  
Environmental Scientist

*Preeda S.*  
(Miss Preeda Somjai)  
Technical Management Team



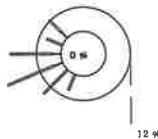
## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 2 Monitor period : 01-02 Jul 2025  
 Wind Speed Model : NRG Symphonie Serial No : 309016789  
 Wind Direction Model : NRG Symphonie Serial No : 309016789

Time	01-02 Jul 2025	
	WS(m/s)	WD
12:00 - 13:00	1.1	WSW
13:00 - 14:00	1.2	SW
14:00 - 15:00	1.1	SSW
15:00 - 16:00	1.2	NW
16:00 - 17:00	1.1	W
17:00 - 18:00	0.9	W
18:00 - 19:00	1.1	WSW
19:00 - 20:00	1.1	SW
20:00 - 21:00	1.2	WSW
21:00 - 22:00	1.3	NW
22:00 - 23:00	0.9	WSW
23:00 - 24:00	1.1	SW
00:00 - 01:00	0.8	NW
01:00 - 02:00	1.3	W
02:00 - 03:00	1.1	WNW
03:00 - 04:00	1.3	W
04:00 - 05:00	1.2	SSW
05:00 - 06:00	1.2	SW
06:00 - 07:00	1.2	W
07:00 - 08:00	1.1	WNW
08:00 - 09:00	1.1	WSW
09:00 - 10:00	1.1	WSW
10:00 - 11:00	1.1	WSW
11:00 - 12:00	1.1	W

Wind Rose



0.5-1 1-2 2-3 3-4 4-6 >= 6  
 WIND SPEED (m/s) - Scale 1:3

File Control : R:\Database\Windrose\FileControl\Win-225010-Takuan-Ao pradu Community 2 01-02 Jul 2025

(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

Preeda S.  
 (Miss Preeda Somjai)  
 Technical Management Team



## บริษัท ซีคอต จำกัด

### SECOT CO., LTD.

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

### AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd, Branch 6 REQUEST SERVICE No. : 1401/68  
 (Refinery GC 6) SAMPLING METHOD : Subatmospheric Pressure Sampling  
 SAMPLING BY : SECOT Co., Ltd. ANALYTICAL DATE : 08/08/2025  
 SAMPLING DATE : 01-02/08/2025 SAMPLE CONDITION : Normal  
 SAMPLING TIME : 14:49-15:00 FILE CODE : 225010\_TO-15\_August  
 RECEIVED DATE : 03/08/2025  
 REPORT DATE : 08/08/2025

Compound	SAMPLING LOCATION				STANDARD*
	Non Detection		Takuan-Ao Pradu Community 2		
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>	(µg/m <sup>3</sup> )
Benzene	0.004*	0.013	0.13	0.42	7.6

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

Sirwan Chimsa-nga  
 (Miss Siriwan Chimsa-nga)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18, B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 2

Monitor period : 01-02 Aug 2025

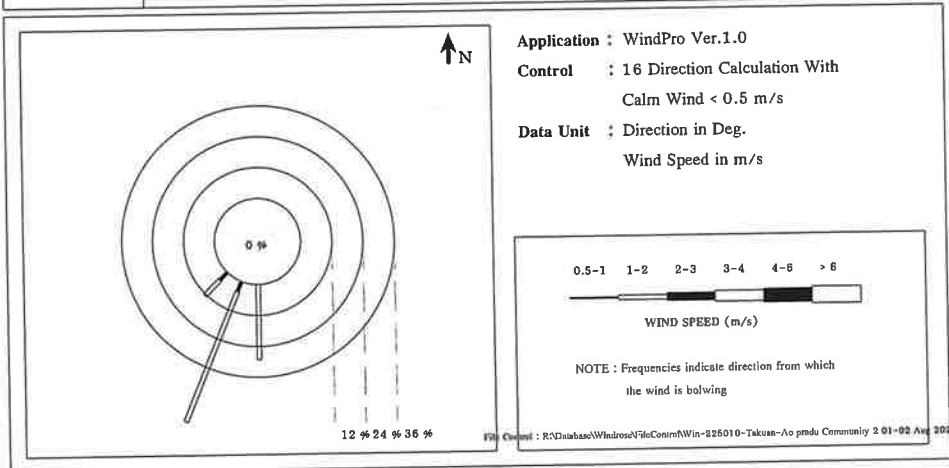
Wind Speed Model : Novalynx WS-25

Serial No : A5088

Wind Direction Model : Novalynx WS-25

Serial No : A5088

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ESE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	0.0000	0.2917	0.0000	0.0000	0.0000	0.0000	0.2917
SSW	0.0417	0.5417	0.0000	0.0000	0.0000	0.0000	0.5833
SW	0.0417	0.0833	0.0000	0.0000	0.0000	0.0000	0.1250
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
W	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.0000						



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 2

Monitor period : 01-02 Aug 2025

Wind Speed Model : Novalynx WS-25

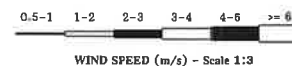
Serial No : A5088

Wind Direction Model : Novalynx WS-25

Serial No : A5088

Time	01-02 Aug 2025	
	WS(m/s)	WD
14:00 - 15:00	1.5	S
15:00 - 16:00	1.1	SSW
16:00 - 17:00	1.7	SSW
17:00 - 18:00	1.4	S
18:00 - 19:00	0.8	SSW
19:00 - 20:00	1.7	S
20:00 - 21:00	1.0	SSW
21:00 - 22:00	1.7	S
22:00 - 23:00	1.4	S
23:00 - 24:00	1.1	S
00:00 - 01:00	1.1	SSW
01:00 - 02:00	1.1	SW
02:00 - 03:00	1.0	SSW
03:00 - 04:00	1.5	SSW
04:00 - 05:00	1.6	SSW
05:00 - 06:00	1.5	S
06:00 - 07:00	1.3	SSW
07:00 - 08:00	0.9	SW
08:00 - 09:00	1.2	SSW
09:00 - 10:00	1.4	SSW
10:00 - 11:00	1.2	SSW
11:00 - 12:00	1.2	SSW
12:00 - 13:00	1.7	SSW
13:00 - 14:00	1.4	SW

Wind Rose



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



# บริษัท ซีคอต จำกัด SECOT CO., LTD.

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

## AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC 6)	REQUEST SERVICE No.	: 1689/68
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 04-05/09/2025	ANALYTICAL DATE	: 09/09/2025
SAMPLING TIME	: 10:21-09:50	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 06/09/2025	FILE CODE	: 225010_TO-15_September
REPORT DATE	: 11/09/2025		

Compound	SAMPLING LOCATION				STANDARD* ( $\mu\text{g}/\text{m}^3$ )
	Non Detection		Takuan-Ao Pradu Community 2		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	0.41	1.31	7.6

Method for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Method TO-15.1999

*Siriwan Chimsa-nga*  
(Miss Siriwan Chimsa-nga)

Analyst

*(Mrs. Araya Tipparuk)*

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18,B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).

R:\Database\Windrose\FileCentre\NWIn-225010-Takuan-Ao pradu Community 2 04-05 Sep 2025



## Meteorological Monitoring Results : Wind Rose MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 2

Monitor period : 04-05 Sep 2025

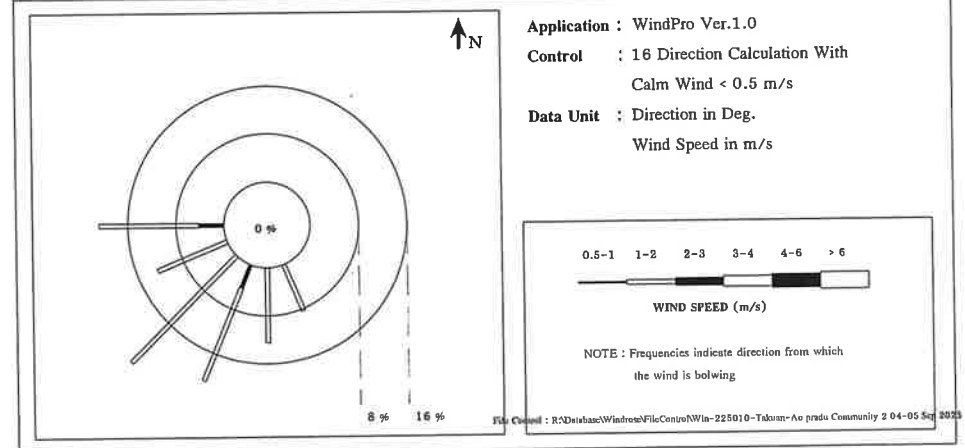
Wind Speed Model : NRG Symphonie

Serial No : 309013914

Wind Direction Model : NRG Symphonie

Serial No : 309013914

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ESE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833
S	0.0000	0.1250	0.0000	0.0000	0.0000	0.0000	0.1250
SSW	0.0417	0.1667	0.0000	0.0000	0.0000	0.0000	0.2083
SW	0.0000	0.2500	0.0000	0.0000	0.0000	0.0000	0.2500
WSW	0.0000	0.1250	0.0000	0.0000	0.0000	0.0000	0.1250
W	0.0417	0.1667	0.0000	0.0000	0.0000	0.0000	0.2083
WNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.0000						



*(Miss Katesarin Vorradetwittaya)*  
Environmental Scientist

*Preeda S.*  
(Miss Preeda Somjai)  
Technical Management Team



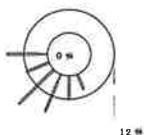
## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 2 Monitor period : 04-05 Sep 2025  
 Wind Speed Model : NRG Symphonie Serial No : 309013914  
 Wind Direction Model : NRG Symphonie Serial No : 309013914

Time	04-05 Sep 2025	
	WS(m/s)	WD
10:00 - 11:00	1.0	S
11:00 - 12:00	1.3	SW
12:00 - 13:00	1.4	WSW
13:00 - 14:00	0.9	SSW
14:00 - 15:00	1.4	W
15:00 - 16:00	1.1	SW
16:00 - 17:00	1.3	W
17:00 - 18:00	1.2	WSW
18:00 - 19:00	1.3	S
19:00 - 20:00	1.2	SW
20:00 - 21:00	1.3	SSW
21:00 - 22:00	1.0	SSE
22:00 - 23:00	1.0	W
23:00 - 24:00	1.3	W
00:00 - 01:00	1.2	WSW
01:00 - 02:00	1.5	SW
02:00 - 03:00	1.5	SSE
03:00 - 04:00	1.0	SSW
04:00 - 05:00	1.5	S
05:00 - 06:00	1.5	SSW
06:00 - 07:00	1.1	W
07:00 - 08:00	1.2	SSW
08:00 - 09:00	1.3	SW
09:00 - 10:00	1.3	SW

Wind Rose



0.5-1 1-2 2-3 3-4 4-6 >=6  
 WIND SPEED (m/s) - Scale 1:3

File Control : R:\Database\Windrose\FileControl\Win-225010-Takuan-Ao pradu Community 2 04-05 Sep 2025

(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

(Miss Preeda Somjai)  
 Technical Management Team



## บริษัท ซีคอต จำกัด

### SECOT CO., LTD.

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

### AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. Branch 6 REQUEST SERVICE No. : 1872/68  
 (Refinery GC 6) SAMPLING METHOD : Subatmospheric Pressure Sampling  
 SAMPLING BY : SECOT Co., Ltd. ANALYTICAL DATE : 08/10/2025  
 SAMPLING DATE : 01-02/10/2025 SAMPLE CONDITION : Normal  
 SAMPLING TIME : 11:55-11:04 FILE CODE : 225010\_TO-15\_October  
 RECEIVED DATE : 03/10/2025  
 REPORT DATE : 09/10/2025

REPORT DATE		SAMPLING LOCATION		STANDARD* ( $\mu\text{g}/\text{m}^3$ )	
Compound	Non Detection		Takuan-Ao Pradu Community 2		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv		$\mu\text{g}/\text{m}^3$
Benzene	0.004	0.013	0.30	0.96	7.6

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> : EPA Methods TO-15, 1997

(Miss Siriwan Chimsa-nga)  
 Analyst

(Mrs. Araya Tipparuk)  
 Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18, B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 2

Monitor period : 01-02 Oct 2025

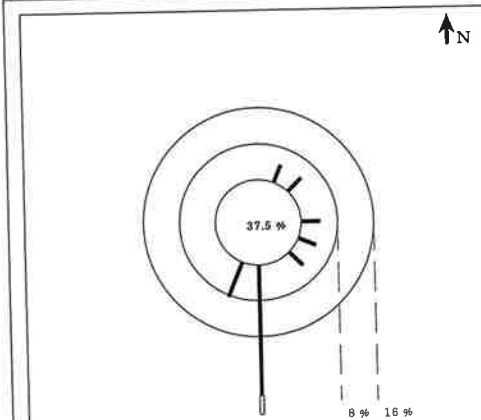
Wind Speed Model : Scarlet WS-21

Serial No : AD:28

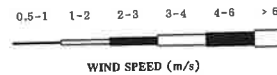
Wind Direction Model : Scarlet WS-21

Serial No : AD:28

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
NE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
ENE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
ESE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
SSE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	0.2917	0.0417	0.0000	0.0000	0.0000	0.0000	0.3333
SSW	0.0833	0.0000	0.0000	0.0000	0.0000	0.0000	0.0833
SW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
W	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.3750						



Application : WindPro Ver.1.0

Control : 16 Direction Calculation With  
Calm Wind < 0.5 m/sData Unit : Direction in Deg.  
Wind Speed in m/sNOTE : Frequencies indicate direction from which  
the wind is blowing

File Control : R:\Database\Windrose\FileControl\Win-225010-Takuan-Ao pradu Community 2 01-02 Oct 2025

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 2

Monitor period : 01-02 Oct 2025

Wind Speed Model : Scarlet WS-21

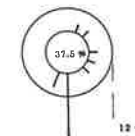
Serial No : AD:28

Wind Direction Model : Scarlet WS-21

Serial No : AD:28

Time	01-02 Oct 2025	
	WS(m/s)	WD
11:00 - 12:00	0.8	S
12:00 - 13:00	1.0	S
13:00 - 14:00	0.7	S
14:00 - 15:00	0.5	S
15:00 - 16:00	0.6	S
16:00 - 17:00	0.5	SSW
17:00 - 18:00	0.4	S
18:00 - 19:00	0.4	S
19:00 - 20:00	0.5	S
20:00 - 21:00	0.4	SSE
21:00 - 22:00	0.6	SSW
22:00 - 23:00	0.5	ESE
23:00 - 24:00	0.4	NE
00:00 - 01:00	0.4	NNE
01:00 - 02:00	0.4	NE
02:00 - 03:00	0.4	NE
03:00 - 04:00	0.5	NNE
04:00 - 05:00	0.4	NE
05:00 - 06:00	0.4	ENE
06:00 - 07:00	0.5	NE
07:00 - 08:00	0.7	E
08:00 - 09:00	0.9	S
09:00 - 10:00	0.6	SE
10:00 - 11:00	0.7	S

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-225010-Takuan-Ao pradu Community 2 01-02 Oct 2025

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



# บริษัท ซีคอต จำกัด SECOT CO., LTD.

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

## AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. Branch 6 (Refinery GC 6)  
REQUEST SERVICE No. : 2100/68  
SAMPLING BY : SECOT Co., Ltd.  
SAMPLING METHOD : Subatmospheric Pressure Sampling  
SAMPLING DATE : 04-05/11/2025  
ANALYTICAL DATE : 07/11/2025  
SAMPLING TIME : 10:04-10:29  
SAMPLE CONDITION : Normal  
RECEIVED DATE : 06/11/2025  
FILE CODE : 225010\_TO-15\_November  
REPORT DATE : 11/11/2025

Compound	Non Detection		SAMPLING LOCATION		STANDARD* ( $\mu\text{g}/\text{m}^3$ )
			Takuan-Ao Pradu Community 2		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	0.54	1.72	7.6

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2<sup>nd</sup> - EPA Methods TO-15, 1999

*Siriwan Chimsa-nga*  
(Miss Siriwan Chimsa-nga)

Analyst

*(Mrs. Araya Tippasuk)*  
(Mrs. Araya Tippasuk)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18,B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).

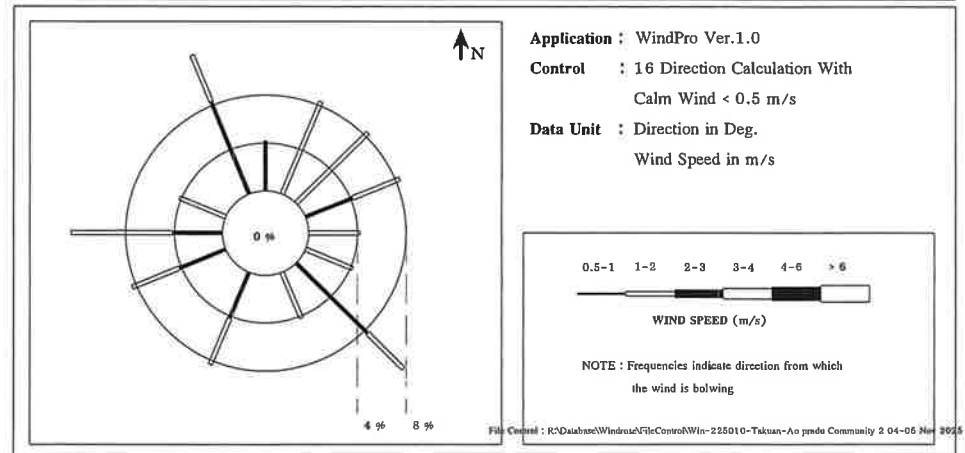
R:\Database\Windrose\FileControl\Win-225010-Takuan-Ao pradu Community 2 04-05 Nov 2025



## Meteorological Monitoring Results : Wind Rose MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 2  
Monitor period : 04-05 Nov 2025  
Wind Speed Model : NRG Symphonie  
Serial No : 35262609  
Wind Direction Model : NRG Symphonie  
Serial No : 35262609

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	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
NNE	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833
NE	0.0000	0.0833	0.0000	0.0000	0.0000	0.0000	0.0833
ENE	0.0417	0.0417	0.0000	0.0000	0.0000	0.0000	0.0833
E	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
ESE	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
SE	0.0833	0.0417	0.0000	0.0000	0.0000	0.0000	0.1250
SSE	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
S	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSW	0.0417	0.0417	0.0000	0.0000	0.0000	0.0000	0.0833
SW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WSW	0.0417	0.0417	0.0000	0.0000	0.0000	0.0000	0.0833
W	0.0417	0.0833	0.0000	0.0000	0.0000	0.0000	0.1250
WNW	0.0000	0.0417	0.0000	0.0000	0.0000	0.0000	0.0417
NW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNW	0.0833	0.0417	0.0000	0.0000	0.0000	0.0000	0.1250
CALM	0.0000						



*(Miss Katesarin Vorradetwittaya)*  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

*(Miss Preeda Somjai)*  
(Miss Preeda Somjai)  
Technical Management Team



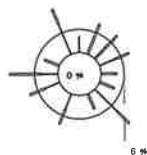
## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 2      Monitor period : 04-05 Nov 2025  
 Wind Speed Model : NRG Symphonie      Serial No : 35262609  
 Wind Direction Model : NRG Symphonie      Serial No : 35262609

Time	04-05 Nov 2025	
	WS(m/s)	WD
09:00 - 10:00	1.8	NNE
10:00 - 11:00	1.6	ENE
11:00 - 12:00	1.6	E
12:00 - 13:00	1.3	W
13:00 - 14:00	1.6	WNW
14:00 - 15:00	1.4	WSW
15:00 - 16:00	1.3	ESE
16:00 - 17:00	1.1	SE
17:00 - 18:00	0.6	SE
18:00 - 19:00	0.8	SE
19:00 - 20:00	1.0	SSW
20:00 - 21:00	1.1	SSE
21:00 - 22:00	0.8	SSW
22:00 - 23:00	0.6	NNW
23:00 - 24:00	1.4	NNW
00:00 - 01:00	1.5	NE
01:00 - 02:00	0.9	WSW
02:00 - 03:00	1.0	W
03:00 - 04:00	1.3	W
04:00 - 05:00	1.1	NNE
05:00 - 06:00	1.0	N
06:00 - 07:00	0.9	NNW
07:00 - 08:00	0.8	ENE
08:00 - 09:00	1.9	NE

Wind Rose



0.5-1   1-2   2-3   3-4   4-6   >= 6  
 WIND SPEED (m/s) - Scale 1:3

File Control : R:\Database\Windrose\FileControl\Win-225010-Takuan-Ao pradu Community 2 04-05 Nov 2025

(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

Preeda S.  
 (Miss Preeda Somjai)  
 Technical Management Team



## บริษัท ซีคอต จำกัด

### SECOT CO., LTD.

239 ถนนวิมลคลองประปา 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

### AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC 6)  
 REQUEST SERVICE No. : 2411/68  
 SAMPLING METHOD : Subatmospheric Pressure Sampling  
 ANALYTICAL DATE : 22/12/2025  
 SAMPLE CONDITION : Normal  
 FILE CODE : 225010\_TO-15\_December  
 SAMPLING BY : SECOT Co., Ltd.  
 SAMPLING DATE : 16-17/12/2025  
 RECEIVED DATE : 18/12/2025  
 REPORT DATE : 23/12/2025

REPORT DATE		SAMPLING LOCATION				STANDARD* (µg/m <sup>3</sup> )
Compound	Non Detection		Takuan-Ao Pradu Community 2			
	ppbv	µg/m <sup>3</sup>	ppbv	µg/m <sup>3</sup>		
Benzene	0.004	0.013	0.88	2.81	7.6	

Method for the Determination of Toxic Organic Compound in Ambient Air, 1<sup>st</sup> : EPA Methods TO-15, 1999

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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

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

3. \* Notification of the Pollution Control Department, dated December 18, B.E.2551(2008), which was published in the Royal Government Gazette Vol. 126, Special Part 13D dated January 27, B.E. 2552 (2009).



## Meteorological Monitoring Results : Wind Rose MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 2

Monitor period : 16-17 Dec 2025

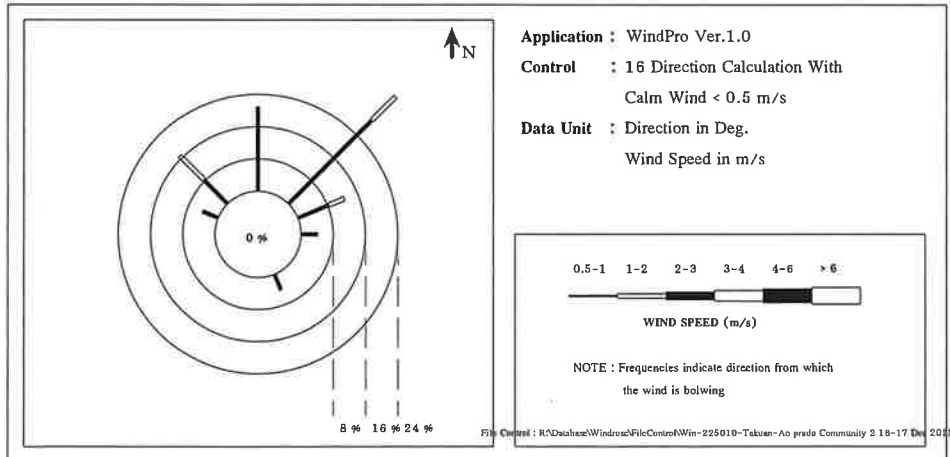
Wind Speed Model : Campbell CR510

Serial No : 10693

Wind Direction Model : Campbell CR510

Serial No : 10693

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	0.2083	0.0000	0.0000	0.0000	0.0000	0.0000	0.2083
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.2917	0.0833	0.0000	0.0000	0.0000	0.0000	0.3750
ENE	0.0833	0.0417	0.0000	0.0000	0.0000	0.0000	0.1250
E	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
ESE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
S	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WSW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
W	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WNW	0.0417	0.0000	0.0000	0.0000	0.0000	0.0000	0.0417
NW	0.0833	0.0833	0.0000	0.0000	0.0000	0.0000	0.1667
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.0000						



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose MTR-PTTGC6-Refinery

Location : Takuan-Ao pradu Community 2

Monitor period : 16-17 Dec 2025

Wind Speed Model : Campbell CR510

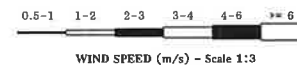
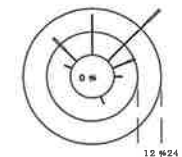
Serial No : 10693

Wind Direction Model : Campbell CR510

Serial No : 10693

Time	16-17 Dec 2025	
	WS(m/s)	WD
11:00 - 12:00	1.3	ENE
12:00 - 13:00	0.9	E
13:00 - 14:00	0.8	ENE
14:00 - 15:00	0.8	NE
15:00 - 16:00	0.6	ENE
16:00 - 17:00	0.6	SSE
17:00 - 18:00	1.0	NE
18:00 - 19:00	0.9	NE
19:00 - 20:00	1.1	NE
20:00 - 21:00	0.9	NE
21:00 - 22:00	0.9	NE
22:00 - 23:00	0.8	NE
23:00 - 24:00	0.8	N
00:00 - 01:00	0.8	N
01:00 - 02:00	1.0	NW
02:00 - 03:00	0.9	N
03:00 - 04:00	0.9	NW
04:00 - 05:00	1.0	NW
05:00 - 06:00	0.9	WNW
06:00 - 07:00	0.9	NW
07:00 - 08:00	0.8	N
08:00 - 09:00	0.7	N
09:00 - 10:00	0.7	NE
10:00 - 11:00	0.9	NE

Wind Rose



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



บริษัท ซีคอต จำกัด  
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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REFERENCE NO. : 225010-Amb-2508-0002  
Branch 6 (Refinery) SAMPLING DATE : 13-20/08/2025  
SAMPLING BY : SECOT Co., Ltd. ANALYTICAL DATE : 27/08/2025-01/09/2025  
RECEIVED DATE : 26/08/2025 SAMPLE CONDITION : Normal  
REPORT DATE : 03/09/2025 SITE OPERATOR : Mr. Siwanon Kulawong  
LOCATION DESCRIPTION : 1. North of Refinery Area 3. Takuan-Ao Pradu Community 1  
2. North of VCU Area 4. Takuan-Ao Pradu Community 2

PARAMETER	SAMPLING DATE	UNITS	RESULTS				STANDARD*	REFERENCE METHOD
			1	2	3	4		
TSP (24 hr)	13-14/08/2025	mg/m <sup>3</sup>	0.052	0.052	0.042	0.031	0.330	High Volume Air
	14-15/08/2025	mg/m <sup>3</sup>	0.042	0.042	0.043	0.030		Sampler / Gravimetric
	15-16/08/2025	mg/m <sup>3</sup>	0.079	0.064	0.043	0.039		Method
	16-17/08/2025	mg/m <sup>3</sup>	0.061	0.049	0.035	0.036		
	17-18/08/2025	mg/m <sup>3</sup>	0.054	0.054	0.042	0.033		
	18-19/08/2025	mg/m <sup>3</sup>	0.033	0.041	0.038	0.038		
	19-20/08/2025	mg/m <sup>3</sup>	0.026	0.041	0.039	0.042		

*Bongpa Puthum*

(Miss Pornnapa Budthum)

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. \* Notification of the National Environment Board, No.24, B.E.2547 (2004).



บริษัท ซีคอต จำกัด  
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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REFERENCE NO. : 225010-Amb-2508-0002  
Branch 6 (Refinery) SAMPLING DATE : 13-20/08/2025  
SAMPLING BY : SECOT Co., Ltd. ANALYTICAL DATE : 27/08/2025-01/09/2025  
RECEIVED DATE : 26/08/2025 SAMPLE CONDITION : Normal  
REPORT DATE : 03/09/2025 SITE OPERATOR : Mr. Siwanon Kulawong  
LOCATION DESCRIPTION : 1. North of Refinery Area 3. Takuan-Ao Pradu Community 1  
2. North of VCU Area 4. Takuan-Ao Pradu Community 2

PARAMETER	SAMPLING DATE	UNITS	RESULTS				STANDARD*	REFERENCE METHOD
			1	2	3	4		
PM-10 (24 hr)	13-14/08/2025	mg/m <sup>3</sup>	0.034	0.025	0.027	0.024	0.120	High Volume Air Sampler
	14-15/08/2025	mg/m <sup>3</sup>	0.026	0.031	0.034	0.027		(Hi-Vol. PM-10 Size
	15-16/08/2025	mg/m <sup>3</sup>	0.046	0.035	0.036	0.026		Selective Inlet)/
	16-17/08/2025	mg/m <sup>3</sup>	0.039	0.034	0.021	0.032		Gravimetric Method
	17-18/08/2025	mg/m <sup>3</sup>	0.037	0.026	0.017	0.032		
	18-19/08/2025	mg/m <sup>3</sup>	0.022	0.025	0.036	0.031		
	19-20/08/2025	mg/m <sup>3</sup>	0.018	0.034	0.034	0.031		

*Bongpa Puthum*

(Miss Pornnapa Budthum)

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. \* Notification of the National Environment Board, No.24, B.E.2547 (2004).



บริษัท ซีคอต จำกัด  
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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 225010-Amb-2508-0002
	Branch 6 (Refinery)	SAMPLING DATE	: 13-19/08/2025
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 06/09/2025
RECEIVED DATE	: 26/08/2025	SAMPLE CONDITION	: Normal
REPORT DATE	: 06/09/2025	SITE OPERATOR	: Mr. Siwanon Kulawong
INSTRUMENT	: Impingment Absorption		
LOCATION DESCRIPTION	1. North of Refinery Area 3. Takuan-Ao Pradu Community 1		
	2. North of VCU Area 4. Takuan-Ao Pradu Community 2		

PARAMETER	SAMPLING DATE	UNITS	ND Non-detectable	RESULTS				REFERENCE METHOD
				1	2	3	4	
Hydrogen Sulfide	13/08/2025	ppm	<0.001	ND	ND	ND	ND	Intersociety Committee
(H <sub>2</sub> S)	14/08/2025	ppm	<0.001	ND	ND	ND	ND	Method 701
	15/08/2025	ppm	<0.001	ND	ND	ND	ND	
	16/08/2025	ppm	<0.001	ND	ND	ND	ND	
	17/08/2025	ppm	<0.001	ND	ND	ND	ND	
	18/08/2025	ppm	<0.001	ND	ND	ND	ND	
	19/08/2025	ppm	<0.001	ND	ND	ND	ND	

(Miss Pornnopa Buddthum)

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.



บริษัท ซีคอต จำกัด  
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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 225010-Amb-2508-0002
	Branch 6 (Refinery)	SAMPLING DATE	: 13-19/08/2025
SAMPLING BY	: SECOT Co., Ltd.	ANALYTICAL DATE	: 01/09/2025
RECEIVED DATE	: 26/08/2025	SAMPLE CONDITION	: Normal
REPORT DATE	: 06/09/2025	SITE OPERATOR	: Mr. Siwanon Kulawong
INSTRUMENT	: Impingment Absorption		
LOCATION DESCRIPTION	1. North of Refinery Area 3. Takuan-Ao Pradu Community 1		
	2. North of VCU Area 4. Takuan-Ao Pradu Community 2		

PARAMETER	SAMPLING DATE	UNITS	ND Non-detectable	RESULTS				REFERENCE METHOD
				1	2	3	4	
Non-methane	13/08/2025	ppm	<0.05	0.14	0.10	0.15	0.16	Flame Ionization
Hydrocarbon	14/08/2025	ppm	<0.05	0.11	0.16	0.17	0.08	Detection Method
(NMHC)	15/08/2025	ppm	<0.05	0.12	0.13	0.12	0.12	
	16/08/2025	ppm	<0.05	0.17	0.12	0.16	0.18	
	17/08/2025	ppm	<0.05	0.13	0.17	0.12	0.17	
	18/08/2025	ppm	<0.05	0.15	0.19	0.18	0.14	
	19/08/2025	ppm	<0.05	0.14	0.13	0.15	0.07	

(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.



บริษัท ซีคอต จำกัด  
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

#### AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REFERENCE NO. : 225010-Amb-2508-0002  
Branch 6 (Refinery) SAMPLING DATE : 13-19/08/2025  
SAMPLING BY : SECOT Co., Ltd. ANALYTICAL DATE : 01/09/2025  
RECEIVED DATE : 26/08/2025 SAMPLE CONDITION : Normal  
REPORT DATE : 06/09/2025 SITE OPERATOR : Mr. Siwanon Kulawong  
INSTRUMENT : Impingment Absorption  
LOCATION DESCRIPTION : 1. North of Refinery Area 3. Takuan-Ao Pradu Community 1  
2. North of VCU Area 4. Takuan-Ao Pradu Community 2

PARAMETER	SAMPLING DATE	UNITS	ND Non-detectable	RESULTS				REFERENCE METHOD
				1	2	3	4	
Total Hydrocarbon	13/08/2025	ppm	<0.10	3.18	2.90	2.98	2.97	Flame Ionization
(THC)	14/08/2025	ppm	<0.10	3.23	2.98	3.15	3.11	Detection Method
	15/08/2025	ppm	<0.10	3.12	2.97	3.02	2.94	
	16/08/2025	ppm	<0.10	3.19	3.10	3.11	2.82	
	17/08/2025	ppm	<0.10	3.12	3.18	3.18	2.90	
	18/08/2025	ppm	<0.10	3.25	3.11	2.93	3.15	
	19/08/2025	ppm	<0.10	3.10	3.05	3.02	3.19	

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Miss Narisa Poowasanpetchi

(Miss Narisa Poowasanpetchi)

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.



#### Ambient Air Monitoring Results : Sulfur dioxide MTR-PTTGC6-Refinery

Location : North of Refinery Area Monitor Period : 13-20 Aug 2025  
Analyzer Model : API 100A Station No : Mobile 10  
Serial No : 347 Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E Serial No : 587  
Calibration Gas Cylinder I.D.: EB0102326  
Certified Date : 10 Jan 2025 Cal Concentration (ppb) : 0,100,200,400  
Expire Date : 09 Jan 2026

Time	SO2 Concentration (ppb)						
	13-14 Aug 2025	14-15 Aug 2025	15-16 Aug 2025	16-17 Aug 2025	17-18 Aug 2025	18-19 Aug 2025	19-20 Aug 2025
09:00 - 10:00	6.8	6.0	8.9	7.7	5.8	8.1	9.0
10:00 - 11:00	6.3	8.8	8.7	4.7	7.2	9.1	7.5
11:00 - 12:00	8.0	10.9	7.5	5.0	8.8	11.4	8.4
12:00 - 13:00	9.3	10.0	8.3	8.5	5.9	7.6	9.8
13:00 - 14:00	10.4	5.9	6.3	3.4	6.6	8.3	11.1
14:00 - 15:00	11.9	6.2	5.9	5.0	8.5	10.8	8.9
15:00 - 16:00	9.9	7.1	8.1	5.9	8.8	9.5	9.8
16:00 - 17:00	7.7	7.2	8.3	5.0	2.8	10.6	9.1
17:00 - 18:00	8.6	7.4	7.6	3.5	7.7	6.4	10.1
18:00 - 19:00	6.9	6.3	6.0	5.6	7.0	7.3	9.5
19:00 - 20:00	6.6	7.6	8.2	4.8	5.7	5.9	8.6
20:00 - 21:00	7.6	10.2	7.9	5.4	3.3	8.6	7.8
21:00 - 22:00	6.2	11.3	6.1	3.5	3.6	6.8	8.1
22:00 - 23:00	8.7	11.3	7.5	5.0	5.5	10.6	10.6
23:00 - 00:00	7.9	10.2	4.0	8.3	5.7	11.7	11.0
00:00 - 01:00	9.3	11.8	4.3	8.3	7.8	9.3	9.2
01:00 - 02:00	12.0	11.2	5.9	6.8	8.0	9.8	8.2
02:00 - 03:00	9.1	9.4	7.8	7.2	7.3	6.4	8.4
03:00 - 04:00	11.1	11.9	5.5	8.2	7.3	8.5	6.3
04:00 - 05:00	7.3	10.3	5.2	6.2	7.1	8.4	8.0
05:00 - 06:00	7.0	8.5	6.5	3.9	6.7	8.7	7.9
06:00 - 07:00	6.6	7.1	7.4	4.0	6.0	7.5	8.6
07:00 - 08:00	7.4	6.7	5.7	3.4	7.2	8.0	8.1
08:00 - 09:00	8.9	6.9	3.4	4.4	5.7	6.9	7.2
Average-24Hr*	8.4	8.8	6.7	5.6	6.5	8.6	8.8
Max-1Hr	12.0	11.9	8.9	8.5	8.8	11.7	11.1
Min-1Hr	6.2	5.9	3.4	3.4	2.8	5.9	6.3
Standard-1Hr	300 ppb(780 ug/cu.m)						
Standard-24Hr	120 ppb(300 ug/cu.m)						

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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Ambient Air Monitoring Results : Sulfur dioxide MTR-PTTGC6-Refinery

Location : North of VCU Area      Monitor Period : 13-20 Aug 2025  
Analyzer Model : API 100A      Station No : Shelter 17  
Serial No : 382      Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E      Serial No : 587  
Calibration Gas Cylinder I.D.: EB0102326  
Certified Date : 10 Jan 2025      Cal Concentration (ppb) : 0,100,200,400  
Expire Date : 09 Jan 2026

Time	SO2 Concentration (ppb)						
	13-14 Aug 2025	14-15 Aug 2025	15-16 Aug 2025	16-17 Aug 2025	17-18 Aug 2025	18-19 Aug 2025	19-20 Aug 2025
10:00 - 11:00	6.5	7.1	7.1	4.8	6.9	8.1	10.0
11:00 - 12:00	6.7	6.2	6.6	6.7	5.1	8.3	5.8
12:00 - 13:00	6.3	8.5	6.5	7.1	7.3	7.4	5.1
13:00 - 14:00	7.9	7.5	6.1	2.5	5.5	9.1	8.8
14:00 - 15:00	10.7	5.6	7.4	4.5	5.3	7.8	8.6
15:00 - 16:00	6.3	10.7	6.4	1.7	7.0	9.4	8.6
16:00 - 17:00	7.1	10.7	6.2	2.0	7.5	9.5	8.3
17:00 - 18:00	6.9	5.8	5.5	4.1	6.0	9.3	8.1
18:00 - 19:00	7.0	7.9	4.9	3.4	6.4	6.0	9.9
19:00 - 20:00	5.2	4.9	7.0	6.3	6.0	4.8	10.3
20:00 - 21:00	7.7	9.9	6.0	3.5	5.0	6.3	5.4
21:00 - 22:00	7.0	7.9	7.1	5.4	5.9	7.5	8.3
22:00 - 23:00	7.4	10.8	6.2	6.8	6.2	7.7	7.7
23:00 - 00:00	6.8	9.2	2.2	6.1	6.2	9.0	9.6
00:00 - 01:00	7.9	8.4	3.9	6.5	6.4	7.5	9.6
01:00 - 02:00	7.2	10.6	1.8	6.3	7.2	9.9	9.0
02:00 - 03:00	9.6	7.9	6.7	7.3	7.3	7.5	6.6
03:00 - 04:00	8.4	10.6	2.8	7.4	7.1	4.5	4.6
04:00 - 05:00	9.6	5.6	4.0	5.7	6.3	6.9	4.7
05:00 - 06:00	7.4	6.0	2.0	5.2	5.6	4.9	5.6
06:00 - 07:00	6.2	4.9	2.5	7.1	6.9	6.2	7.2
07:00 - 08:00	5.4	7.7	3.9	3.5	6.0	7.2	6.8
08:00 - 09:00	5.7	6.0	6.8	4.6	7.0	4.8	4.6
09:00 - 10:00	7.5	4.8	6.4	6.0	5.9	5.3	4.4

Average-24Hr*	7.3	7.7	5.3	5.2	6.3	7.3	7.4
Max-1Hr	10.7	10.8	7.4	7.4	7.5	9.9	10.3
Min-1Hr	5.2	4.8	1.8	1.7	5.0	4.5	4.4

Standard-1Hr	300 ppb(780 ug/cu.m)						
Standard-24Hr	120 ppb(300 ug/cu.m)						

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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Ambient Air Monitoring Results : Sulfur dioxide MTR-PTTGC6-Refinery

Location : Takuan-Ao Pradu Community 1      Monitor Period : 13-20 Aug 2025  
Analyzer Model : Thermo 43C      Station No : SCT-17  
Serial No : 0607415773      Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E      Serial No : 587  
Calibration Gas Cylinder I.D.: EB0102326  
Certified Date : 10 Jan 2025      Cal Concentration (ppb) : 0,100,200,400  
Expire Date : 09 Jan 2026

Time	SO2 Concentration (ppb)						
	13-14 Aug 2025	14-15 Aug 2025	15-16 Aug 2025	16-17 Aug 2025	17-18 Aug 2025	18-19 Aug 2025	19-20 Aug 2025
11:00 - 12:00	6.9	6.4	6.5	4.1	6.1	7.1	6.6
12:00 - 13:00	6.5	7.0	5.9	3.2	6.3	7.3	7.2
13:00 - 14:00	7.3	7.1	6.2	3.9	6.2	6.9	9.1
14:00 - 15:00	6.9	6.8	6.0	2.9	5.3	7.8	9.9
15:00 - 16:00	6.9	6.9	6.0	3.5	5.8	7.4	9.4
16:00 - 17:00	7.2	7.2	5.9	3.0	5.1	6.8	9.7
17:00 - 18:00	6.8	7.1	5.8	3.2	4.9	6.5	9.6
18:00 - 19:00	5.9	7.0	5.8	3.5	5.2	6.5	8.7
19:00 - 20:00	6.0	8.0	5.4	2.9	4.6	6.0	8.1
20:00 - 21:00	6.2	8.4	6.2	4.0	5.1	6.4	7.5
21:00 - 22:00	6.0	9.1	6.2	4.2	4.7	6.5	7.2
22:00 - 23:00	5.9	9.6	5.6	4.2	4.6	6.5	7.6
23:00 - 00:00	7.0	9.3	4.0	5.5	6.1	7.0	6.9
00:00 - 01:00	7.2	8.8	3.6	6.3	6.0	6.7	7.6
01:00 - 02:00	7.5	9.2	3.8	7.0	5.7	6.6	6.7
02:00 - 03:00	8.2	8.1	4.5	8.3	5.8	6.1	6.0
03:00 - 04:00	7.5	7.1	4.5	6.7	4.9	5.6	6.3
04:00 - 05:00	7.2	6.7	3.5	5.3	5.4	5.6	5.9
05:00 - 06:00	6.0	5.1	3.9	5.1	4.4	5.7	5.1
06:00 - 07:00	6.2	5.3	4.0	4.6	4.4	5.6	6.1
07:00 - 08:00	5.8	5.9	4.6	4.0	4.8	5.4	5.8
08:00 - 09:00	5.7	5.4	5.0	3.9	4.6	5.4	5.6
09:00 - 10:00	5.9	5.8	4.9	4.8	5.7	6.5	5.8
10:00 - 11:00	5.9	6.2	4.5	5.0	7.2	6.7	6.2

Average-24Hr*	6.6	7.2	5.1	4.5	5.4	6.4	7.3
Max-1Hr	8.2	9.6	6.5	8.3	7.2	7.8	9.9
Min-1Hr	5.7	5.1	3.5	2.9	4.4	5.4	5.1

Standard-1Hr	300 ppb(780 ug/cu.m)						
Standard-24Hr	120 ppb(300 ug/cu.m)						

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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Ambient Air Monitoring Results : Sulfur dioxide

### MTR-PTTGC6-Refinery

Location : Takuan-Ao Pradu Community 2      Monitor Period : 13-20 Aug 2025  
 Analyzer Model : API 100A      Station No : SECOT-016  
 Serial No : 342      Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E      Serial No : 587  
 Calibration Gas Cylinder I.D.: EB0102326  
 Certified Date : 10 Jan 2025      Cal Concentration (ppb) : 0,100,200,400  
 Expire Date : 09 Jan 2026

Time	SO2 Concentration (ppb)						
	13-14 Aug 2025	14-15 Aug 2025	15-16 Aug 2025	16-17 Aug 2025	17-18 Aug 2025	18-19 Aug 2025	19-20 Aug 2025
10:00 - 11:00	5.9	4.8	4.9	3.1	3.9	6.3	5.6
11:00 - 12:00	5.4	6.2	5.2	2.3	4.9	5.8	6.2
12:00 - 13:00	6.0	5.9	5.0	2.4	5.2	6.6	6.6
13:00 - 14:00	6.2	5.6	5.4	2.9	5.2	6.1	7.6
14:00 - 15:00	6.2	5.7	4.8	1.9	5.1	6.3	8.3
15:00 - 16:00	6.4	5.4	4.1	2.5	4.4	6.0	8.4
16:00 - 17:00	5.9	8.1	4.6	2.4	3.7	5.7	8.5
17:00 - 18:00	5.4	5.3	4.7	1.9	3.6	6.0	8.1
18:00 - 19:00	5.1	5.8	5.0	2.5	4.1	5.2	7.4
19:00 - 20:00	4.5	6.3	5.1	2.3	3.9	5.0	6.7
20:00 - 21:00	5.1	7.4	4.9	2.5	3.7	4.7	6.1
21:00 - 22:00	4.9	7.7	4.8	3.2	3.6	5.5	6.1
22:00 - 23:00	4.9	9.0	5.4	3.6	4.1	5.5	6.4
23:00 - 00:00	6.3	8.0	2.5	4.3	5.3	5.8	6.1
00:00 - 01:00	6.5	8.4	2.5	5.2	5.3	6.2	5.7
01:00 - 02:00	7.1	8.2	3.4	6.7	4.5	5.1	5.7
02:00 - 03:00	7.3	7.8	3.3	6.6	4.2	5.1	5.0
03:00 - 04:00	7.0	6.7	2.7	5.7	4.2	4.5	5.2
04:00 - 05:00	6.0	5.2	2.6	4.7	4.3	5.2	5.1
05:00 - 06:00	5.6	4.7	2.0	3.5	4.0	5.0	4.7
06:00 - 07:00	5.0	4.4	2.3	3.1	4.0	5.0	4.6
07:00 - 08:00	4.3	4.1	3.5	3.1	3.3	4.5	4.4
08:00 - 09:00	3.9	4.8	3.2	2.6	4.3	5.1	4.9
09:00 - 10:00	5.2	4.7	3.3	3.9	5.1	5.7	4.9
Average-24Hr*	5.7	6.2	4.0	3.5	4.3	5.5	6.2
Max-1Hr	7.3	9.0	5.4	6.7	5.3	6.6	8.5
Min-1Hr	3.9	4.1	2.0	1.9	3.3	4.5	4.4
Standard-1Hr	300 ppb(780 ug/cu.m)						
Standard-24Hr	120 ppb(300 ug/cu.m)						

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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Ambient Air Monitoring Results : Nitrogen dioxide

### MTR-PTTGC6-Refinery

Location : North of Refinery Area      Monitor Period : 13-20 Aug 2025  
 Analyzer Model : API 200A      Station No : Mobile 10  
 Serial No : 1528      Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E      Serial No : 587  
 Calibration Gas Cylinder I.D.: EB0102326  
 Certified Date : 08 Jan 2025      Cal Concentration (ppb) : 0,100,200,400  
 Expire Date : 07 Jan 2026

Time	NO2 Concentration (ppb)						
	13-14 Aug 2025	14-15 Aug 2025	15-16 Aug 2025	16-17 Aug 2025	17-18 Aug 2025	18-19 Aug 2025	19-20 Aug 2025
09:00 - 10:00	7.7	6.7	7.4	6.7	5.4	7.6	8.2
10:00 - 11:00	10.5	9.7	8.9	7.2	9.2	12.1	12.9
11:00 - 12:00	12.1	14.4	10.3	6.8	11.3	13.9	12.5
12:00 - 13:00	13.2	13.6	10.0	6.3	10.9	14.0	14.6
13:00 - 14:00	14.0	12.7	9.3	6.1	10.9	14.2	18.2
14:00 - 15:00	13.6	11.0	8.1	4.9	9.4	14.2	17.4
15:00 - 16:00	13.3	10.4	7.8	4.5	9.5	14.0	17.8
16:00 - 17:00	11.3	10.5	8.2	5.0	8.3	13.7	17.9
17:00 - 18:00	9.5	11.2	8.7	4.9	8.4	12.7	17.5
18:00 - 19:00	8.7	12.2	9.1	4.9	7.7	11.0	16.5
19:00 - 20:00	7.9	14.1	9.3	4.8	6.4	10.7	15.0
20:00 - 21:00	7.6	14.9	9.3	5.5	6.3	9.3	13.8
21:00 - 22:00	7.1	15.7	9.4	5.7	6.8	9.9	13.6
22:00 - 23:00	7.7	16.4	9.1	7.3	7.0	10.2	13.6
23:00 - 00:00	11.4	15.3	5.4	9.2	10.6	11.1	12.7
00:00 - 01:00	10.1	14.2	5.3	9.3	9.0	10.1	10.5
01:00 - 02:00	8.7	10.0	5.1	7.7	6.2	7.9	7.2
02:00 - 03:00	6.3	7.7	4.6	6.0	4.6	5.7	5.0
03:00 - 04:00	5.6	5.9	4.7	4.9	3.5	4.5	4.3
04:00 - 05:00	4.8	5.4	4.0	3.1	2.9	4.2	3.7
05:00 - 06:00	5.0	5.0	3.3	2.2	3.3	3.8	3.8
06:00 - 07:00	4.7	5.2	4.3	1.8	3.0	3.4	3.3
07:00 - 08:00	4.6	5.4	4.2	1.2	3.6	3.2	4.2
08:00 - 09:00	5.0	6.2	5.4	3.2	4.9	5.1	4.8
Average-24Hr*	8.8	10.6	7.1	5.4	7.0	9.4	11.1
Max-1Hr	14.0	16.4	10.3	9.3	11.3	14.2	17.9
Min-1Hr	4.6	5.0	3.3	1.2	2.9	3.2	3.3
Standard-1Hr	170 ppb(320 ug/cu.m)						
Standard-24Hr							

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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Ambient Air Monitoring Results : Nitrogen dioxide MTR-PTTGC6-Refinery

<b>Location :</b> North of VCU Area	<b>Monitor Period :</b> 13-20 Aug 2025
<b>Analyzer Model :</b> API 200A	<b>Station No :</b> Shelter 17
<b>Serial No :</b> 2365	<b>Site Operator :</b> Mr. Siwanon Kulawong

<b>Calibrator Model :</b> Teledyne 700E	<b>Serial No :</b> 587
<b>Calibration Gas Cylinder I.D.:</b> EB0102326	
<b>Certified Date :</b> 08 Jan 2025	<b>Cal Concentration (ppb) :</b> 0,100,200,400
<b>Expire Date :</b> 07 Jan 2026	

Time	NO2 Concentration (ppb)						
	13-14 Aug 2025	14-15 Aug 2025	15-16 Aug 2025	16-17 Aug 2025	17-18 Aug 2025	18-19 Aug 2025	19-20 Aug 2025
10:00 - 11:00	8.9	8.4	8.1	6.2	9.0	10.5	10.7
11:00 - 12:00	10.2	12.8	9.4	5.3	11.5	12.1	11.2
12:00 - 13:00	11.2	12.2	8.2	5.3	10.5	12.2	12.9
13:00 - 14:00	12.1	10.3	7.1	3.8	10.6	12.5	14.5
14:00 - 15:00	12.0	9.4	6.9	3.5	9.4	12.6	15.7
15:00 - 16:00	11.8	8.8	6.7	3.5	9.1	12.4	16.2
16:00 - 17:00	10.0	9.1	7.1	3.2	8.3	11.8	16.2
17:00 - 18:00	8.1	9.2	7.3	3.2	7.1	11.1	15.8
18:00 - 19:00	6.8	10.8	6.8	3.2	7.1	9.9	14.8
19:00 - 20:00	5.8	12.6	7.4	3.8	6.0	8.7	13.3
20:00 - 21:00	5.5	13.3	7.9	3.3	5.8	7.4	12.1
21:00 - 22:00	6.0	14.1	8.0	4.6	6.0	8.5	11.9
22:00 - 23:00	6.4	14.9	7.1	5.3	6.3	9.1	11.7
23:00 - 00:00	10.1	13.8	4.3	8.9	8.2	9.7	11.5
00:00 - 01:00	8.3	12.6	3.8	8.8	7.2	8.5	9.4
01:00 - 02:00	7.2	8.7	3.2	6.9	5.0	6.3	5.7
02:00 - 03:00	4.7	6.1	3.1	6.0	3.4	3.8	3.5
03:00 - 04:00	4.5	4.1	2.8	3.6	2.0	3.0	2.0
04:00 - 05:00	3.4	3.8	2.4	1.8	2.0	2.8	1.9
05:00 - 06:00	3.0	3.9	2.4	1.3	1.6	2.5	2.3
06:00 - 07:00	2.7	3.2	2.2	0.4	1.7	2.4	1.5
07:00 - 08:00	3.2	4.0	3.3	0.9	1.9	1.5	2.2
08:00 - 09:00	3.9	5.0	3.9	1.9	3.0	3.2	2.6
09:00 - 10:00	5.5	6.0	4.6	4.8	6.1	7.0	4.9
Average-24Hr*	7.1	9.0	5.6	4.1	6.2	7.9	9.4
Max-1Hr	12.1	14.9	9.4	8.9	11.5	12.6	16.2
Min-1Hr	2.7	3.2	2.2	0.4	1.6	1.5	1.5
Standard-1Hr	170 ppb(320 ug/cu.m)						
Standard-24Hr	-						

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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Ambient Air Monitoring Results : Nitrogen dioxide MTR-PTTGC6-Refinery

<b>Location :</b> Takuan-Ao Pradu Community 1	<b>Monitor Period :</b> 13-20 Aug 2025
<b>Analyzer Model :</b> Thermo 42C	<b>Station No :</b> SCT-17
<b>Serial No :</b> 0426708263	<b>Site Operator :</b> Mr. Siwanon Kulawong

<b>Calibrator Model :</b> Teledyne 700E	<b>Serial No :</b> 587
<b>Calibration Gas Cylinder I.D.:</b> EB0102326	
<b>Certified Date :</b> 08 Jan 2025	<b>Cal Concentration (ppb) :</b> 0,100,200,400
<b>Expire Date :</b> 07 Jan 2026	

Time	NO2 Concentration (ppb)						
	13-14 Aug 2025	14-15 Aug 2025	15-16 Aug 2025	16-17 Aug 2025	17-18 Aug 2025	18-19 Aug 2025	19-20 Aug 2025
11:00 - 12:00	8.0	9.1	7.2	5.9	11.1	9.4	9.1
12:00 - 13:00	9.0	10.2	7.1	6.5	10.5	10.0	9.5
13:00 - 14:00	9.9	7.8	6.7	6.4	10.3	9.9	10.6
14:00 - 15:00	8.9	9.0	7.8	5.7	8.8	10.5	12.8
15:00 - 16:00	9.2	8.2	7.0	4.6	8.4	8.7	13.7
16:00 - 17:00	7.7	8.8	6.4	5.2	8.0	8.5	13.0
17:00 - 18:00	7.4	7.8	8.1	4.7	7.2	9.1	12.0
18:00 - 19:00	7.1	8.0	7.1	4.9	7.6	9.1	12.6
19:00 - 20:00	6.2	9.7	6.9	4.6	6.5	8.1	11.1
20:00 - 21:00	6.8	10.2	8.0	4.6	7.8	8.2	8.4
21:00 - 22:00	6.4	10.7	8.2	5.0	7.4	7.5	8.5
22:00 - 23:00	6.4	12.2	8.3	6.2	7.2	7.0	8.8
23:00 - 00:00	8.4	9.9	5.6	8.9	8.5	8.2	9.2
00:00 - 01:00	8.5	10.1	5.5	7.8	6.5	7.3	7.5
01:00 - 02:00	6.7	8.6	4.4	8.2	6.3	7.2	6.7
02:00 - 03:00	6.9	7.4	5.3	5.0	5.9	6.2	6.3
03:00 - 04:00	5.0	5.1	5.6	5.3	2.1	2.6	3.6
04:00 - 05:00	5.9	3.0	3.9	3.0	1.9	3.2	2.9
05:00 - 06:00	3.0	4.7	3.6	2.3	2.2	3.5	3.5
06:00 - 07:00	3.5	3.6	5.3	3.1	3.8	3.8	2.5
07:00 - 08:00	3.3	3.1	5.2	2.4	2.6	2.6	3.1
08:00 - 09:00	5.9	5.3	4.8	3.8	5.7	3.7	2.4
09:00 - 10:00	5.7	5.9	5.8	4.1	7.0	7.1	6.8
10:00 - 11:00	7.0	7.3	5.6	8.5	8.3	8.6	7.4
Average-24Hr*	6.8	7.7	6.2	5.3	6.7	7.1	8.0
Max-1Hr	9.9	12.2	8.3	8.9	11.1	10.5	13.7
Min-1Hr	3.0	3.0	3.6	2.3	1.9	2.6	2.4
Standard-1Hr	170 ppb(320 ug/cu.m)						
Standard-24Hr	-						

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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Ambient Air Monitoring Results : Nitrogen dioxide MTR-PTTGC6-Refinery

Location : Takuan-Ao Pradu Community 2      Monitor Period : 13-20 Aug 2025  
Analyzer Model : API 200AU      Station No : SECOT-016  
Serial No : 144      Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E      Serial No : 587  
Calibration Gas Cylinder I.D.: EB0102326  
Certified Date : 08 Jan 2025      Cal Concentration (ppb) : 0,100,200,400  
Expire Date : 07 Jan 2026

Time	NO2 Concentration (ppb)						
	13-14 Aug 2025	14-15 Aug 2025	15-16 Aug 2025	16-17 Aug 2025	17-18 Aug 2025	18-19 Aug 2025	19-20 Aug 2025
10:00 - 11:00	7.7	7.8	6.9	5.6	8.1	7.7	7.9
11:00 - 12:00	7.9	9.1	8.0	4.9	8.9	9.5	7.5
12:00 - 13:00	7.9	8.8	7.4	4.2	8.1	8.5	8.5
13:00 - 14:00	7.9	8.5	6.1	5.6	9.0	8.1	11.3
14:00 - 15:00	8.2	6.5	5.5	4.5	8.5	9.7	11.8
15:00 - 16:00	7.3	6.6	6.9	4.7	7.6	9.4	13.0
16:00 - 17:00	7.4	6.1	5.8	3.3	8.0	8.0	12.6
17:00 - 18:00	5.9	7.4	5.3	4.5	6.6	7.9	12.5
18:00 - 19:00	7.3	7.9	6.0	3.5	7.2	7.2	11.9
19:00 - 20:00	5.0	8.4	5.8	3.2	6.2	7.8	9.9
20:00 - 21:00	6.7	9.3	7.4	4.9	5.2	7.2	9.5
21:00 - 22:00	5.5	9.4	7.1	4.5	6.8	6.7	7.9
22:00 - 23:00	5.1	11.9	5.9	5.4	7.5	7.5	8.7
23:00 - 00:00	7.9	10.1	4.3	7.4	6.9	7.0	8.8
00:00 - 01:00	6.5	8.9	3.5	7.6	5.2	6.6	7.0
01:00 - 02:00	6.3	7.6	5.1	7.4	4.5	6.5	6.3
02:00 - 03:00	5.0	4.9	3.6	5.1	3.0	3.3	3.8
03:00 - 04:00	4.3	2.7	3.3	2.8	1.6	1.6	2.4
04:00 - 05:00	2.6	3.0	1.1	2.9	1.6	2.2	3.1
05:00 - 06:00	2.4	3.3	2.0	1.3	2.6	2.4	1.3
06:00 - 07:00	2.8	2.1	4.0	0.6	3.0	1.3	1.3
07:00 - 08:00	3.2	3.4	4.0	1.3	3.0	1.8	2.1
08:00 - 09:00	5.8	2.7	3.3	2.5	1.7	2.3	2.5
09:00 - 10:00	6.5	6.6	4.5	4.0	6.7	6.9	5.1
Average-24Hr*	6.0	6.8	5.1	4.2	5.7	6.1	7.4
Max-1Hr	8.2	11.9	8.0	7.6	9.0	9.7	13.0
Min-1Hr	2.4	2.1	1.1	0.6	1.6	1.3	1.3
Standard-1Hr	170 ppb(320 ug/cu.m)						
Standard-24Hr	-						

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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

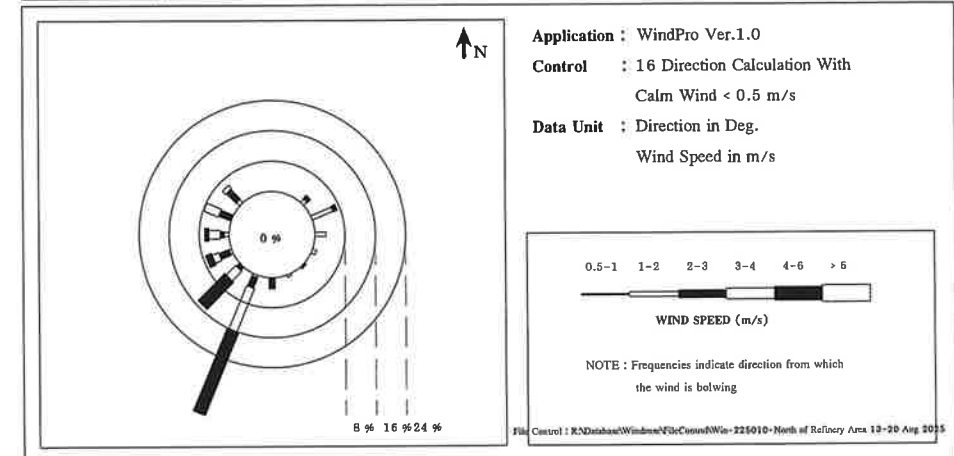
Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose MTR-PTTGC6-Refinery

Location : North of Refinery Area      Monitor period : 13-20 Aug 2025  
Wind Speed Model : Scarlet WS-21      Serial No : AD:08  
Wind Direction Model : Scarlet WS-21      Serial No : AD:08

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0119	0.0119	0.0000	0.0000	0.0000	0.0238
ENE	0.0000	0.0595	0.0119	0.0000	0.0000	0.0000	0.0714
E	0.0000	0.0298	0.0000	0.0000	0.0000	0.0000	0.0298
ESE	0.0000	0.0119	0.0000	0.0000	0.0000	0.0000	0.0119
SE	0.0000	0.0000	0.0060	0.0000	0.0000	0.0000	0.0060
SSE	0.0000	0.0060	0.0000	0.0000	0.0000	0.0000	0.0060
S	0.0000	0.0000	0.0298	0.0000	0.0000	0.0000	0.0298
SSW	0.0000	0.0060	0.0298	0.1250	0.2381	0.0000	0.3988
SW	0.0000	0.0000	0.0119	0.0357	0.1012	0.0000	0.1488
WSW	0.0000	0.0060	0.0298	0.0179	0.0179	0.0000	0.0714
W	0.0000	0.0119	0.0119	0.0298	0.0119	0.0000	0.0655
WNW	0.0000	0.0000	0.0357	0.0417	0.0000	0.0000	0.0774
NW	0.0000	0.0119	0.0357	0.0119	0.0000	0.0000	0.0595
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.0000						



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : North of Refinery Area

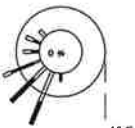
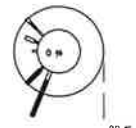
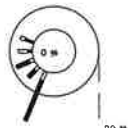
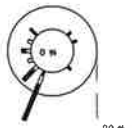
Monitor period : 13-20 Aug 2025

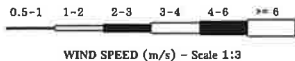
Wind Speed Model : Scarlet WS-21

Serial No : AD:08

Wind Direction Model : Scarlet WS-21


Serial No : AD:08

Time	13-14 Aug 2025		14-15 Aug 2025		15-16 Aug 2025		16-17 Aug 2025	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
09:00 - 10:00	3.6	SSW	4.3	SW	4.5	SSW	3.7	SW
10:00 - 11:00	3.9	SSW	4.7	SSW	4.5	SW	4.0	SW
11:00 - 12:00	4.8	SSW	4.8	SSW	4.6	SSW	4.3	SSW
12:00 - 13:00	5.1	SSW	5.1	SSW	4.9	SSW	4.6	SSW
13:00 - 14:00	4.9	SSW	5.5	SW	4.9	SSW	4.0	SW
14:00 - 15:00	5.1	SW	5.3	SW	4.5	SSW	4.3	SSW
15:00 - 16:00	4.5	SW	4.8	SSW	4.1	SSW	3.9	SSW
16:00 - 17:00	3.6	WSW	4.8	SSW	4.5	SSW	3.7	SSW
17:00 - 18:00	3.3	W	4.2	SSW	4.4	SSW	4.5	SSW
18:00 - 19:00	1.8	WSW	3.6	SSW	3.9	SSW	4.0	SSW
19:00 - 20:00	2.3	S	4.1	SSW	3.9	SSW	4.2	SSW
20:00 - 21:00	3.6	SSW	4.3	SSW	4.3	SSW	4.0	SSW
21:00 - 22:00	3.8	SSW	4.0	SW	5.1	WSW	4.8	SSW
22:00 - 23:00	4.3	SW	3.3	WNW	5.4	WSW	4.2	W
23:00 - 24:00	4.5	SW	3.4	NW	4.9	WSW	3.5	W
00:00 - 01:00	3.2	WNW	3.3	WNW	3.5	WNW	4.8	SW
01:00 - 02:00	3.4	NW	2.9	WNW	3.7	W	2.3	SSW
02:00 - 03:00	2.6	WNW	2.8	NW	4.2	SW	3.4	WSW
03:00 - 04:00	2.3	W	1.6	NW	3.9	SW	3.3	WNW
04:00 - 05:00	2.7	WSW	2.2	NW	2.7	W	2.9	NW
05:00 - 06:00	2.4	WSW	1.9	NW	2.5	WNW	2.1	NW
06:00 - 07:00	2.3	WSW	1.8	W	2.7	WNW	2.2	NE
07:00 - 08:00	3.6	SW	2.1	SW	3.2	W	2.1	ENE
08:00 - 09:00	3.8	SW	3.3	SSW	3.2	WSW	2.3	SE
Wind Rose								



File Content : R:\Database\Windrose\FileContent\Win-225010-North of Refinery Area 13-20 Aug 2025

  
 (Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

  
 (Miss Preeda Somjai)  
 Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : North of Refinery Area

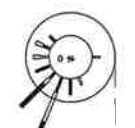
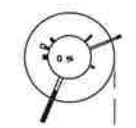
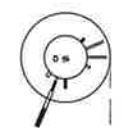
Monitor period : 13-20 Aug 2025

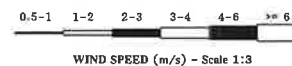
Wind Speed Model : Scarlet WS-21

Serial No : AD:08

Wind Direction Model : Scarlet WS-21


Serial No : AD:08

Time	17-18 Aug 2025		18-19 Aug 2025		19-20 Aug 2025	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
09:00 - 10:00	3.6	W	3.8	SSW	4.2	SSW
10:00 - 11:00	4.1	SW	4.5	SSW	4.2	SSW
11:00 - 12:00	5.9	SW	4.9	SSW	4.4	SSW
12:00 - 13:00	5.2	SW	4.8	SSW	3.7	SW
13:00 - 14:00	4.8	SW	4.9	SSW	4.2	SSW
14:00 - 15:00	4.3	SSW	4.3	SSW	3.9	SSW
15:00 - 16:00	3.9	SSW	4.5	SSW	3.8	SSW
16:00 - 17:00	3.8	SSW	4.0	SSW	2.9	SSW
17:00 - 18:00	3.3	SSW	3.3	SSW	1.9	SSW
18:00 - 19:00	3.4	SSW	4.4	W	1.3	E
19:00 - 20:00	2.9	SSW	3.4	WNW	1.3	ENE
20:00 - 21:00	1.7	E	2.3	WNW	1.1	ENE
21:00 - 22:00	2.3	S	2.1	NW	1.1	E
22:00 - 23:00	1.8	SSE	1.4	ESE	1.3	ESE
23:00 - 24:00	2.2	S	1.6	ENE	2.9	S
00:00 - 01:00	2.8	SSW	1.8	ENE	3.3	SSW
01:00 - 02:00	2.9	WNW	1.6	ENE	3.4	SSW
02:00 - 03:00	2.9	NW	2.0	ENE	2.9	SSW
03:00 - 04:00	3.1	WNW	1.6	NE	2.6	S
04:00 - 05:00	2.3	WSW	1.5	NE	1.5	ENE
05:00 - 06:00	1.7	W	1.3	ENE	1.6	ENE
06:00 - 07:00	2.4	SW	1.3	ENE	2.0	NE
07:00 - 08:00	2.6	WSW	1.4	ENE	1.9	E
08:00 - 09:00	3.2	SW	3.7	SSW	1.9	E
Wind Rose						



File Content : R:\Database\Windrose\FileContent\Win-225010-North of Refinery Area 13-20 Aug 2025

  
 (Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

  
 (Miss Preeda Somjai)  
 Technical Management Team

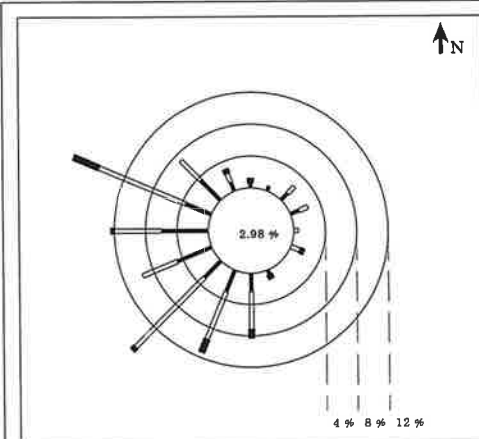


## Meteorological Monitoring Results : Wind Rose

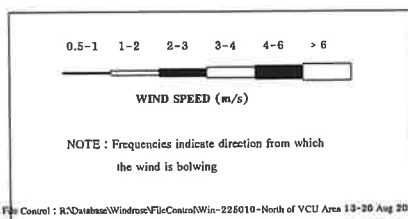
### MTR-PTTGC6-Refinery

Location : North of VCU Area      Monitor period : 13-20 Aug 2025  
 Wind Speed Model : Novalynx WS-25      Serial No : A5086  
 Wind Direction Model : Novalynx WS-25      Serial No : A5086

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	0.0060	0.0000	0.0060	0.0000	0.0000	0.0000	0.0119
NNE	0.0060	0.0000	0.0000	0.0000	0.0000	0.0000	0.0060
NE	0.0119	0.0119	0.0000	0.0000	0.0000	0.0000	0.0238
ENE	0.0119	0.0119	0.0000	0.0000	0.0000	0.0000	0.0238
E	0.0000	0.0060	0.0000	0.0000	0.0000	0.0000	0.0060
ESE	0.0000	0.0119	0.0060	0.0000	0.0000	0.0000	0.0179
SE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SSE	0.0060	0.0000	0.0060	0.0000	0.0000	0.0000	0.0119
S	0.0238	0.0476	0.0119	0.0000	0.0000	0.0000	0.0833
SSW	0.0298	0.0655	0.0179	0.0000	0.0000	0.0000	0.1131
SW	0.0298	0.1250	0.0060	0.0000	0.0000	0.0000	0.1607
WSW	0.0476	0.0476	0.0000	0.0000	0.0000	0.0000	0.0952
W	0.0595	0.0595	0.0060	0.0000	0.0000	0.0000	0.1250
WNW	0.0357	0.1190	0.0357	0.0000	0.0000	0.0000	0.1905
NW	0.0357	0.0357	0.0000	0.0000	0.0000	0.0000	0.0714
NNW	0.0119	0.0119	0.0060	0.0000	0.0000	0.0000	0.0298
CALM	0.0298						



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



(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

(Miss Preeda Somjai)  
 Technical Management Team



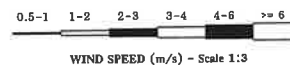
## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : North of VCU Area      Monitor period : 13-20 Aug 2025  
 Wind Speed Model : Novalynx WS-25      Serial No : A5086  
 Wind Direction Model : Novalynx WS-25      Serial No : A5086

Time	13-14 Aug 2025		14-15 Aug 2025		15-16 Aug 2025		16-17 Aug 2025	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
11:00 - 12:00	1.1	W	0.8	W	1.7	SSW	0.6	SSW
12:00 - 13:00	0.7	SW	1.3	WSW	1.3	SW	0.9	WSW
13:00 - 14:00	0.7	WNW	2.0	SSW	1.3	S	1.7	SW
14:00 - 15:00	0.9	WSW	1.6	SW	1.4	WSW	1.3	W
15:00 - 16:00	1.3	NW	1.8	WSW	2.5	SSW	1.7	SSW
16:00 - 17:00	1.6	NNW	1.2	SW	1.6	WNW	1.3	SSW
17:00 - 18:00	1.5	WNW	1.0	SW	1.4	S	2.0	SW
18:00 - 19:00	0.8	SSW	1.1	SW	2.0	S	0.5	N
19:00 - 20:00	0.9	NW	1.8	SW	1.2	S	0.9	W
20:00 - 21:00	0.6	SSW	1.4	WSW	0.6	W	1.3	W
21:00 - 22:00	1.6	WSW	0.5	W	0.7	WSW	0.6	NNW
22:00 - 23:00	0.6	NW	0.6	W	0.6	NW	1.3	W
23:00 - 24:00	1.1	W	0.7	WNW	0.7	W	0.5	SSE
00:00 - 01:00	1.7	WNW	1.2	W	1.9	WNW	0.6	WNW
01:00 - 02:00	1.8	WNW	1.6	NW	0.9	WSW	1.3	SW
02:00 - 03:00	1.1	NW	1.7	WNW	0.9	WNW	1.0	WSW
03:00 - 04:00	2.2	W	1.5	WNW	1.1	SW	1.6	WNW
04:00 - 05:00	1.6	WNW	1.6	WNW	1.4	WNW	2.3	WNW
05:00 - 06:00	1.1	W	1.2	NW	1.0	SW	1.0	W
06:00 - 07:00	1.4	SSW	2.1	WNW	1.3	WNW	1.5	E
07:00 - 08:00	1.4	NW	1.1	SSW	2.3	WNW	1.8	ENE
08:00 - 09:00	1.6	WNW	1.0	WNW	0.9	SW	0.6	W
09:00 - 10:00	1.5	SSW	2.5	N	1.2	W	1.2	WNW
10:00 - 11:00	1.3	S	1.4	SW	2.6	NNW	0.7	WSW

Wind Rose



File Control : R:\Database\Windrose\FireControl\Win-225010-North of VCU Area 13-20 Aug 2025

(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

(Miss Preeda Somjai)  
 Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : North of VCU Area Monitor period : 13-20 Aug 2025

Wind Speed Model : Novalynx WS-25

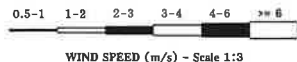
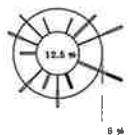
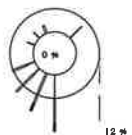
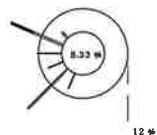
Serial No : A5086

Wind Direction Model : Novalynx WS-25

Serial No : A5086

Time	17-18 Aug 2025		18-19 Aug 2025		19-20 Aug 2025		
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	
11:00 - 12:00	1.5	SW	1.9	S	0.4	ENE	
12:00 - 13:00	0.4	NNW	1.3	SSW	1.7	ENE	
13:00 - 14:00	0.8	W	1.4	SSW	1.1	NE	
14:00 - 15:00	0.5	W	0.5	S	0.7	NW	
15:00 - 16:00	0.8	SSW	0.7	S	0.5	NNE	
16:00 - 17:00	0.9	SSW	1.4	S	0.5	NNW	
17:00 - 18:00	1.0	SW	0.9	S	0.5	ENE	
18:00 - 19:00	1.0	SW	0.8	NW	0.4	SSE	
19:00 - 20:00	0.4	NNW	0.6	WNW	1.2	ESE	
20:00 - 21:00	0.6	SW	1.8	NNW	0.4	NNE	
21:00 - 22:00	0.9	WSW	0.5	SW	1.2	NE	
22:00 - 23:00	0.8	W	0.5	NE	0.6	NW	
23:00 - 24:00	0.6	WSW	0.7	NE	0.6	ENE	
00:00 - 01:00	1.6	SW	0.5	WSW	0.6	SW	
01:00 - 02:00	1.2	WNW	1.8	SSW	0.7	WNW	
02:00 - 03:00	1.6	WNW	1.4	SW	1.5	WNW	
03:00 - 04:00	1.4	WNW	1.5	SSW	0.9	S	
04:00 - 05:00	2.4	WNW	2.2	S	1.6	SW	
05:00 - 06:00	1.2	WNW	2.2	SSW	1.0	S	
06:00 - 07:00	1.5	NW	1.7	WSW	1.4	SSW	
07:00 - 08:00	2.0	WNW	1.6	S	1.9	W	
08:00 - 09:00	2.0	WNW	1.8	SW	1.1	ESE	
09:00 - 10:00	1.4	SW	1.6	WSW	2.3	SSE	
10:00 - 11:00	1.8	SW	1.3	SW	2.0	ESE	

Wind Rose



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

File Control : R:\Database\Windrose\FileControlWin-225010-North of VCU Area 13-20 Aug 2025

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : Takuan-Ao Pradu Community 1

Monitor period : 13-20 Aug 2025

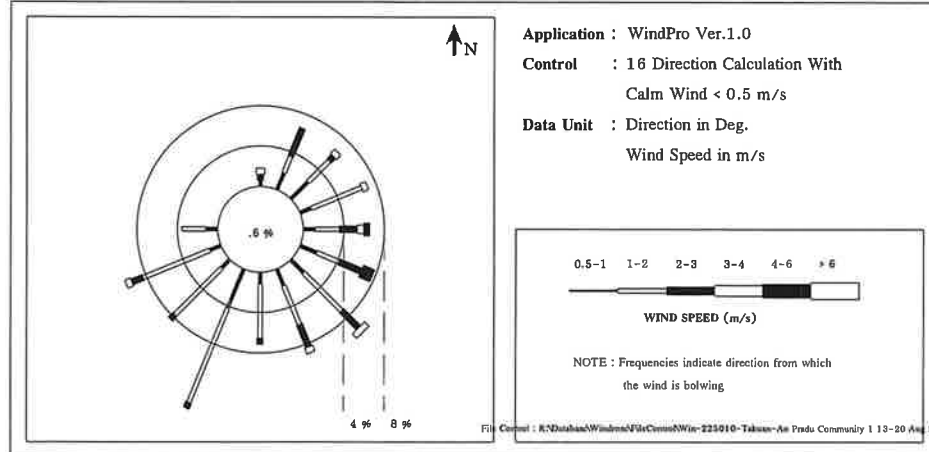
Wind Speed Model : Novalynx WS-25

Serial No : A5088

Wind Direction Model : Novalynx WS-25

Serial No : A5088

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	0.0060	0.0000	0.0060	0.0060	0.0000	0.0000	0.0179
NNE	0.0179	0.0179	0.0298	0.0000	0.0000	0.0000	0.0655
NE	0.0238	0.0298	0.0060	0.0060	0.0000	0.0000	0.0655
ENE	0.0119	0.0536	0.0000	0.0060	0.0000	0.0000	0.0714
E	0.0119	0.0238	0.0179	0.0060	0.0060	0.0000	0.0655
ESE	0.0179	0.0238	0.0238	0.0000	0.0119	0.0000	0.0774
SE	0.0179	0.0536	0.0238	0.0000	0.0000	0.0060	0.1012
SSE	0.0179	0.0417	0.0238	0.0060	0.0000	0.0000	0.0893
S	0.0119	0.0536	0.0060	0.0000	0.0000	0.0000	0.0714
SSW	0.0417	0.1012	0.0060	0.0000	0.0000	0.0000	0.1488
SW	0.0119	0.0655	0.0060	0.0000	0.0000	0.0000	0.0833
WSW	0.0119	0.0714	0.0119	0.0060	0.0000	0.0000	0.1012
W	0.0119	0.0238	0.0000	0.0000	0.0000	0.0000	0.0357
WNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.0060						



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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : Takuan-Ao Pradu Community 1

Monitor period : 13-20 Aug 2025

Wind Speed Model : Novalynx WS-25

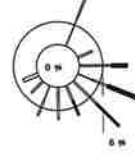
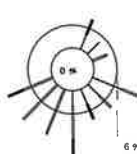
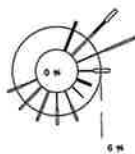
Serial No : A5088

Wind Direction Model : Novalynx WS-25

Serial No : A5088


Time	13-14 Aug 2025		14-15 Aug 2025		15-16 Aug 2025		16-17 Aug 2025	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
11:00 - 12:00	2.6	NE	0.7	ESE	2.3	E	4.7	ESE
12:00 - 13:00	1.5	SSW	1.6	SE	2.5	SE	2.8	SE
13:00 - 14:00	0.8	S	1.6	ESE	1.7	SE	1.1	S
14:00 - 15:00	1.4	NE	2.4	NNE	2.0	ESE	1.5	E
15:00 - 16:00	0.9	SE	0.9	ESE	2.6	E	1.8	ESE
16:00 - 17:00	0.8	ENE	1.4	S	2.0	ESE	4.6	E
17:00 - 18:00	0.8	WSW	1.0	SW	1.7	E	0.5	NNE
18:00 - 19:00	1.0	SSW	0.8	SSE	1.9	S	1.0	SSE
19:00 - 20:00	0.6	ENE	0.6	NNE	1.2	SE	1.1	SSW
20:00 - 21:00	0.9	SSE	0.7	NE	1.8	SSE	0.7	NNE
21:00 - 22:00	2.2	ESE	0.6	SE	2.4	E	0.5	ESE
22:00 - 23:00	0.6	E	0.6	S	1.0	SE	1.0	S
23:00 - 24:00	1.5	S	2.3	SSE	1.8	SSE	1.6	SE
00:00 - 01:00	1.5	ENE	1.0	WSW	1.2	S	1.9	E
01:00 - 02:00	2.3	NNE	1.0	ENE	1.5	ESE	1.0	SE
02:00 - 03:00	1.4	WSW	1.3	SSW	1.7	SSE	2.1	SSE
03:00 - 04:00	1.7	SW	1.4	SSW	2.4	SE	2.4	SE
04:00 - 05:00	1.7	SW	1.9	WSW	2.0	SSE	0.7	SSW
05:00 - 06:00	1.4	NE	1.4	SSW	2.1	SSE	1.5	ENE
06:00 - 07:00	2.5	NNE	1.6	SW	1.9	SE	1.6	NNE
07:00 - 08:00	1.9	ENE	1.2	SW	1.2	SSE	4.3	ESE
08:00 - 09:00	3.6	NE	2.2	WSW	1.7	SE	1.2	SW
09:00 - 10:00	1.9	SSE	2.5	S	2.8	ESE	1.3	NNE
10:00 - 11:00	3.8	E	1.3	S	1.5	ESE	3.4	WSW

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-225010-Takuan-Ao Pradu Community 1 13-20 Aug 2025

  
 (Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

  
 (Miss Preeda Somjai)  
 Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : Takuan-Ao Pradu Community 1

Monitor period : 13-20 Aug 2025

Wind Speed Model : Novalynx WS-25

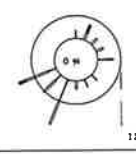
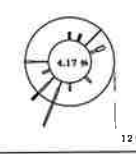
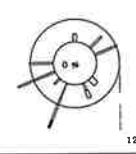
Serial No : A5088

Wind Direction Model : Novalynx WS-25

Serial No : A5088


Time	17-18 Aug 2025		18-19 Aug 2025		19-20 Aug 2025	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
11:00 - 12:00	3.8	SSE	1.3	S	0.8	SW
12:00 - 13:00	1.2	SSE	2.2	N	1.8	WSW
13:00 - 14:00	1.3	NE	2.5	NNE	0.9	SE
14:00 - 15:00	1.4	ENE	1.1	ENE	0.5	SSW
15:00 - 16:00	1.2	ENE	0.8	NE	1.3	WSW
16:00 - 17:00	1.5	ENE	1.1	SSW	0.6	SSW
17:00 - 18:00	0.6	SSW	3.8	ENE	1.3	SSW
18:00 - 19:00	0.9	SSW	0.4	SSW	1.4	SW
19:00 - 20:00	1.6	SW	1.5	SW	1.4	SW
20:00 - 21:00	1.0	SSW	1.2	SSW	1.6	SSW
21:00 - 22:00	1.2	W	0.8	W	1.4	SSW
22:00 - 23:00	1.2	W	0.6	W	1.4	S
23:00 - 24:00	1.2	SSW	0.6	SW	0.6	E
00:00 - 01:00	1.3	WSW	1.2	SSW	1.0	NNE
01:00 - 02:00	1.1	WSW	1.4	SSW	0.9	N
02:00 - 03:00	1.9	WSW	1.3	W	1.9	ENE
03:00 - 04:00	1.6	WSW	1.7	WSW	0.6	SSE
04:00 - 05:00	1.7	WSW	2.0	SW	0.9	WSW
05:00 - 06:00	1.7	W	1.2	SW	1.3	NE
06:00 - 07:00	2.3	SSW	1.9	SSW	2.5	NNE
07:00 - 08:00	1.5	SSW	0.9	NE	1.0	WSW
08:00 - 09:00	1.3	NE	1.1	SE	2.3	WSW
09:00 - 10:00	3.1	N	0.8	NE	1.0	E
10:00 - 11:00	6.3	SE	0.5	SSW	0.8	SSW

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-225010-Takuan-Ao Pradu Community 1 13-20 Aug 2025

  
 (Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

  
 (Miss Preeda Somjai)  
 Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : Takuan-Ao Pradu Community 2

Monitor period : 13-20 Aug 2025

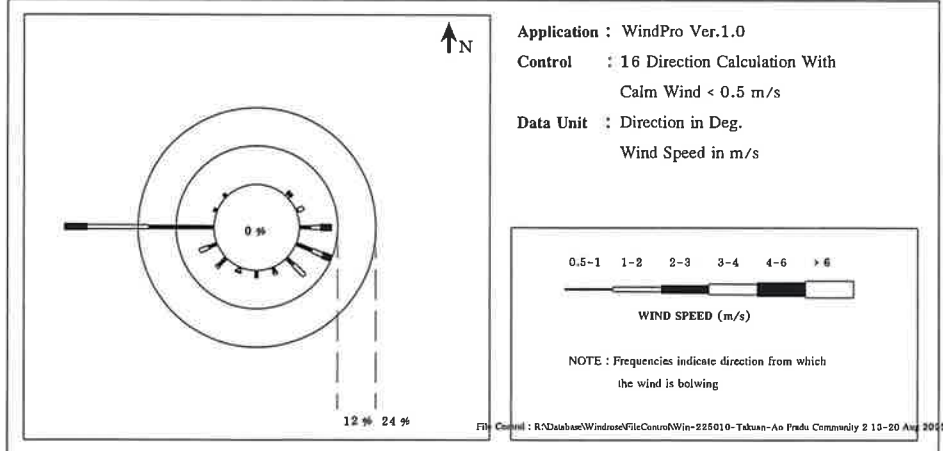
Wind Speed Model : Novalynx WS-25

Serial No : A4905

Wind Direction Model : Novalynx WS-25

Serial No : A4905

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0060	0.0119	0.0000	0.0000	0.0000	0.0179
ENE	0.0060	0.0179	0.0000	0.0000	0.0000	0.0000	0.0238
E	0.0357	0.0298	0.0357	0.0000	0.0000	0.0000	0.1012
ESE	0.0536	0.0357	0.0298	0.0000	0.0000	0.0000	0.1190
SE	0.0298	0.0476	0.0000	0.0000	0.0000	0.0000	0.0774
SSE	0.0179	0.0060	0.0000	0.0000	0.0000	0.0000	0.0238
S	0.0238	0.0000	0.0000	0.0000	0.0000	0.0000	0.0238
SSW	0.0060	0.0060	0.0060	0.0000	0.0000	0.0000	0.0179
SW	0.0357	0.0060	0.0000	0.0000	0.0000	0.0000	0.0417
WSW	0.0298	0.0298	0.0000	0.0000	0.0000	0.0000	0.0595
W	0.2083	0.1905	0.0714	0.0000	0.0000	0.0000	0.4702
WNW	0.0119	0.0000	0.0000	0.0000	0.0000	0.0000	0.0119
NW	0.0119	0.0000	0.0000	0.0000	0.0000	0.0000	0.0119
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.0000						



(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : Takuan-Ao Pradu Community 2

Monitor period : 13-20 Aug 2025

Wind Speed Model : Novalynx WS-25

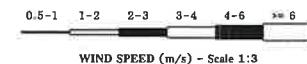
Serial No : A4905

Wind Direction Model : Novalynx WS-25

Serial No : A4905

Time	13-14 Aug 2025		14-15 Aug 2025		15-16 Aug 2025		16-17 Aug 2025	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
10:00 - 11:00	0.5	NW	0.6	WSW	0.6	SW	1.4	E
11:00 - 12:00	1.8	W	2.5	SSW	0.6	SE	2.2	ESE
12:00 - 13:00	0.7	W	0.6	WNW	2.5	ESE	2.5	ESE
13:00 - 14:00	0.8	E	0.8	SW	1.9	ESE	1.0	SE
14:00 - 15:00	0.9	W	1.1	SE	0.7	ESE	0.8	SE
15:00 - 16:00	0.7	W	0.8	ESE	0.8	E	1.8	SE
16:00 - 17:00	0.6	W	1.1	ESE	1.0	E	0.7	S
17:00 - 18:00	0.7	W	0.8	ESE	0.5	E	0.6	S
18:00 - 19:00	2.0	W	2.1	E	1.5	ESE	0.5	S
19:00 - 20:00	1.7	W	0.5	ESE	0.8	SE	0.5	SSW
20:00 - 21:00	1.7	WSW	1.8	SSE	1.6	ESE	1.4	SSW
21:00 - 22:00	0.7	W	1.4	ESE	1.2	SE	0.9	SE
22:00 - 23:00	0.7	WSW	1.9	SE	1.3	SE	1.4	SE
23:00 - 24:00	1.0	W	0.6	S	1.5	ESE	1.1	SE
00:00 - 01:00	0.6	W	0.6	SSE	0.6	E	2.2	E
01:00 - 02:00	0.7	SW	0.6	ENE	2.5	E	0.6	E
02:00 - 03:00	1.5	WSW	2.4	NE	1.8	E	1.5	E
03:00 - 04:00	0.7	W	1.8	NE	0.8	ESE	2.2	E
04:00 - 05:00	0.7	W	2.0	NE	0.8	ESE	0.7	E
05:00 - 06:00	0.7	W	1.9	ENE	2.1	ESE	2.1	E
06:00 - 07:00	0.7	W	0.6	W	2.2	ESE	1.6	ENE
07:00 - 08:00	0.6	W	0.7	W	0.5	ESE	1.8	ENE
08:00 - 09:00	1.6	WSW	0.7	W	1.3	E	0.5	W
09:00 - 10:00	0.7	W	0.7	SSE	2.0	E	1.3	W

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-225010-Takuan-Ao Pradu Community 2 13-20 Aug 2025

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Meteorological Monitoring Results : Wind Rose

### MTR-PTTGC6-Refinery

Location : Takuan-Ao Pradu Community 2      Monitor period : 13-20 Aug 2025  
 Wind Speed Model : Novalynx WS-25      Serial No : A4905  
 Wind Direction Model : Novalynx WS-25      Serial No : A4905

Time	17-18 Aug 2025		18-19 Aug 2025		19-20 Aug 2025		
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	
10:00 - 11:00	1.1	W	1.4	W	0.7	W	
11:00 - 12:00	0.6	W	0.5	W	0.5	W	
12:00 - 13:00	0.7	WSW	1.6	WSW	0.6	W	
13:00 - 14:00	1.8	W	0.7	SW	0.7	W	
14:00 - 15:00	1.3	W	0.8	W	0.7	W	
15:00 - 16:00	1.0	W	0.5	ESE	0.8	W	
16:00 - 17:00	1.9	W	0.5	W	1.7	WSW	
17:00 - 18:00	0.6	ESE	0.5	NW	1.5	W	
18:00 - 19:00	0.5	WSW	0.6	W	1.7	W	
19:00 - 20:00	1.8	W	2.0	W	2.4	W	
20:00 - 21:00	2.1	W	1.3	W	1.0	W	
21:00 - 22:00	1.9	W	2.3	W	1.3	W	
22:00 - 23:00	1.4	W	1.8	W	1.1	W	
23:00 - 24:00	1.2	W	1.1	W	0.6	SE	
00:00 - 01:00	2.1	W	0.7	W	0.7	WSW	
01:00 - 02:00	1.0	W	1.5	W	0.6	W	
02:00 - 03:00	2.1	W	2.3	W	0.6	W	
03:00 - 04:00	1.4	W	1.8	W	0.5	W	
04:00 - 05:00	1.1	W	0.7	W	1.8	W	
05:00 - 06:00	2.0	W	2.4	W	2.1	W	
06:00 - 07:00	1.7	SW	0.9	W	2.2	W	
07:00 - 08:00	0.7	W	0.7	WNW	1.7	W	
08:00 - 09:00	1.2	W	1.4	W	0.6	SSE	
09:00 - 10:00	0.7	SW	1.5	W	0.7	SW	
Wind Rose							

0.5-1   1-2   2-3   3-4   4-6   >= 6

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

File Control : R:\Database\Windrose\FileControl\Win-225010-Takuan-Ao Pradu Community 2 13-20 Aug 2025

(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

(Miss Preeda Somjai)  
 Technical Management Team

## คุณภาพอากาศจากปล่องระบายอากาศ

---



บริษัท ซีคอต จำกัด  
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

### STACK EMISSION ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REFERENCE NO. : 225010-Stack-2508-0003  
Branch 6 (Refinery)

SAMPLING BY : SECOT Co., Ltd. REGISTRATION NO. : 7-239

SAMPLING DATE : 14/08/2025 SAMPLING TIME : 11.00 a.m.-01.00 p.m.

RECEIVED DATE : 19/08/2025 ANALYTICAL DATE : 19-20/08/2025

REPORT DATE : 28/08/2025 OPERATOR : Mr. Song Hengchwankul (7-239-0-0016)

STACK LOCATION : Main Stack FUEL TYPE : Fuel gas and Fuel Oil

SOURCE DESCRIPTION : Combustion SAMPLE CONDITION : Normal

#### STACK DESCRIPTION

Height	: 140.0 m	Flow rate <sup>1/</sup>	: 6,532 Ncu.m/min
Diameter	: 4.5 m	Excess Oxygen	: 4.3 %
Temperature	: 205 °C	Moisture Content	: 11.0 %
Gas Velocity	: 12.4 m/s		

PARAMETER	UNIT	RESULTS		ASSIGN VALUE <sup>2/</sup>	STANDARD <sup>3/</sup>	REFERENCE METHODS
		4.3%O <sub>2</sub>	7%O <sub>2</sub>			
Particulate Matter	mg/Ncu.m	1.28	1.08	240	240	US. EPA Method 5
	g/s	-	0.140	31.120	-	

  
(Miss Pornnapa Budthum)

Analyst

REG.NO.7-239-0-0018



(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.7-239-0-0010

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

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

3. <sup>1/</sup> At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>2/</sup> The assign value in EIA report.

5. <sup>3/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.



บริษัท ซีคอต จำกัด  
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

### STACK EMISSION ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REFERENCE NO. : 225010-Stack-2508-0003  
Branch 6 (Refinery)

SAMPLING BY : SECOT Co., Ltd. REGISTRATION NO. : -

SAMPLING DATE : 14/08/2025 SAMPLING TIME : 11.00 a.m.-01.00 p.m.

RECEIVED DATE : 19/08/2025 ANALYTICAL DATE : 26/08/2025

REPORT DATE : 01/09/2025 OPERATOR : Mr. Song Hengchwankul


STACK LOCATION : Main Stack FUEL TYPE : Fuel gas and Fuel Oil

SOURCE DESCRIPTION : Combustion SAMPLE CONDITION : Normal

#### STACK DESCRIPTION

Height	: 140.0 m	Flow rate <sup>1/</sup>	: 6,532 Ncu.m/min
Diameter	: 4.5 m	Excess Oxygen	: 4.3 %
Temperature	: 205 °C	Moisture Content	: 11.0 %
Gas Velocity	: 12.4 m/s		

PARAMETER	UNIT	ND	RESULTS		ASSIGN VALUE <sup>2/</sup>	STANDARD <sup>3/</sup>	REFERENCE METHODS
		Non-detectable	4.3%O <sub>2</sub>	7%O <sub>2</sub>			
Hydrogen Sulfide (H <sub>2</sub> S)	ppm	<0.30	ND	-	60	60	US. EPA Method 16
		<0.25	-	ND			
	g/s	-	-	<0.046	11.830	-	

  
(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. <sup>1/</sup> At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>2/</sup> The assign value in EIA report.

5. <sup>3/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.



บริษัท ซีคอต จำกัด  
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

### STACK EMISSION ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REFERENCE NO. : 225010-Stack-2508-0003  
Branch 6 (Refinery)  
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 14/08/2025  
SAMPLING TIME : 11.00 a.m.-01.00 p.m. RECEIVED DATE : 19/08/2025  
ANALYTICAL DATE : 22/08/2025 REPORT DATE : 01/09/2025  
STACK LOCATION : Main Stack FUEL TYPE : Fuel gas and Fuel Oil  
SOURCE DESCRIPTION : Combustion SAMPLE CONDITION : Normal  
OPERATOR : Mr. Song Hengchhankul

#### STACK DESCRIPTION

Height	: 140.0 m	Flow rate <sup>1/</sup>	: 6,532 Ncu.m/min
Diameter	: 4.5 m	Excess Oxygen	: 4.3 %
Temperature	: 205 °C	Moisture Content	: 11.0 %
Gas Velocity	: 12.4 m/s		

PARAMETER	UNIT	ND	RESULTS		ASSIGN	STANDARD <sup>3/</sup>	REFERENCE METHODS
		Non-detectable	4.3%O <sub>2</sub>	7%O <sub>2</sub>	VALUE <sup>2/</sup>		
TVOC	ppm	-	4.10	3.44	-	-	US. EPA Method 25A
	g/s	-	-	0.805	-	-	

*Sudaporn S.*  
(Miss Sudaporn Soonthorn)  
Analyst

*Minis 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. <sup>1/</sup> At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>2/</sup> The assign value in EIA report.

5. <sup>3/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.



บริษัท ซีคอต จำกัด  
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

### STACK EMISSION ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REFERENCE NO. : 225010-Stack-2508-0003  
Branch 6 (Refinery)  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION NO. : 7-239  
SAMPLING DATE : 14/08/2025 SAMPLING TIME : 11.00 a.m.-01.00 p.m.  
RECEIVED DATE : 19/08/2025 ANALYTICAL DATE : 20-26/08/2025  
REPORT DATE : 01/09/2025 OPERATOR : Mr. Song Hengchhankul (7-239-0-0016)  
STACK LOCATION : Main Stack FUEL TYPE : Fuel gas and Fuel Oil  
SOURCE DESCRIPTION : Combustion SAMPLE CONDITION : Normal

#### STACK DESCRIPTION

Height	: 140.0 m	Flow rate <sup>1/</sup>	: 6,532 Ncu.m/min
Diameter	: 4.5 m	Excess Oxygen	: 4.3 %
Temperature	: 205 °C	Moisture Content	: 11.0 %
Gas Velocity	: 12.4 m/s		

PARAMETER	UNIT	ND	RESULTS		ASSIGN	STANDARD <sup>3/</sup>	REFERENCE METHODS
		Non-detectable	4.3%O <sub>2</sub>	7%O <sub>2</sub>	VALUE <sup>2/</sup>		
Lead	mg/m <sup>3</sup>	<0.02	ND	ND	5.0	5.0	US. EPA Method 29
	g/s	-	-	<0.002	0.709	-	
Mercury	mg/m <sup>3</sup>	<0.0003	ND	-	2.4	2.4	US. EPA Method 29
	g/s	-	-	<0.00003	0.340	-	

*Araya Tipparuk*  
(Mrs. Araya Tipparuk)  
Analyst

REG.NO.7-239-0-0004

*Minis Poowasanpetch*  
(Miss Narisa Poowasanpetch)  
Technical Management Team

REG.NO.7-239-0-0010

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

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

3. <sup>1/</sup> At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>2/</sup> The assign value in EIA report.

5. <sup>3/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.



บริษัท ซีคอต จำกัด

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

# STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 225010-CEMS-2508-0003
	Branch 6 (Refinery)		
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 7-239
SAMPLING DATE	: 14/08/2025	SAMPLING TIME	: 11.00 a.m.-01.00 p.m.
RECEIVED DATE	: 25/08/2025	ANALYTICAL DATE	: 28/08/2025-11/09/2025
REPORT DATE	: 12/09/2025	OPERATOR	: Mr. Song Hengchwankul (7-239-0-0016)
STACK LOCATION	: Main Stack	FUEL TYPE	: Fuel Gas and Fuel Oil
SOURCE DESCRIPTION	: Combustion	SAMPLE CONDITION	: Normal
STACK DESCRIPTION			
Height	: 140.0 m	Flow Rate*	: 6,532 Ncu.m/min
Diameter	: 4.5 m	Excess Oxygen	: 4.3 %
Temperature	: 204.7 °C	Moisture Content	: 11.0 %
Gas Velocity	: 12.4 m/s		

PARAMETER	RESULT*		STANDARD <sup>1/</sup> / EIA <sup>2/</sup>	EMISSION RATE		REFERENCE  METHOD
	ppm		ppm	g/s		
	4.3%O <sub>2</sub>	7%O <sub>2</sub>	7%O <sub>2</sub>	RESULT	EIA <sup>2/</sup>	
Sulfur Dioxide (SO <sub>2</sub> )	38.29	32.15	950/700	10.922	135.000	US.EPA Method 6C
Oxide of Nitrogen (NOx)	38.37	32.21	200/180	7.857	30.000	US.EPA Method 7E
Carbon Monoxide (CO)	10.07	8.45	690/690	1.255	112.034	US.EPA Method 10

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. 7-239-0-0006

(Miss Preeda Sonjai)

Technical Management Team

REG.NO. 7-239-0-0006

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

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

3. \* At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.

5. <sup>2/</sup> The assigned value is specified in EIA report.

## The Monitoring Result of Emission Concentration Main Stack PTT Global Chemical Public Company Limited August 14, 2025

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	4.49	4.43	38.51	38.51	32.50
2	4.35	4.28	38.45	38.45	32.16
3	4.39	4.32	38.14	38.14	31.98
Average	4.41	4.34	38.37	38.37	32.21

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	4.49	4.43	39.31	39.31	33.18
2	4.35	4.28	37.05	37.05	30.99
3	4.39	4.32	38.51	38.51	32.29
Average	4.41	4.34	38.29	38.29	32.15

Run Number	Oxygen content (%)		Carbonmonoxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	4.49	4.43	10.26	10.24	8.64
2	4.35	4.28	10.17	10.14	8.48
3	4.39	4.32	9.85	9.82	8.23
Average	4.41	4.34	10.09	10.07	8.45

# PTT Global Chemical Public Company Limited

## EMISSION TEST RESULT

**Date:** August 14, 2025  
**Start time:** 11:10 AM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**SO<sub>2</sub> instrument Model:** TELEDYNE 100 EH  
**CO instrument Model:** API 300 A  
**Fuel Type :** Fuel Gas and Fuel Oil

**Run # : 1**  
**Location :** Main Stack  
**Finish time :** 11:30 AM  
**Serial No.:** 071023-47  
**Serial No.:** 435  
**Serial No.:** 186  
**Serial No.:** 1070  
**Test Operator :** Song H.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	SO <sub>2</sub> (ppm)	CO (ppm)
11:10 AM	4.36	38.63	37.54	14.53
11:11 AM	4.38	37.58	36.72	6.93
11:12 AM	4.35	38.62	38.98	13.24
11:13 AM	4.42	38.69	36.34	8.08
11:14 AM	4.51	39.62	36.72	8.83
11:15 AM	4.49	38.73	36.86	9.89
11:16 AM	4.49	39.82	36.73	11.49
11:17 AM	4.51	39.54	37.52	8.49
11:18 AM	4.56	39.82	41.98	11.67
11:19 AM	4.56	39.32	43.07	12.27
11:20 AM	4.48	39.87	42.62	7.34
11:21 AM	4.48	38.72	40.74	6.16
11:22 AM	4.53	37.81	40.79	10.82
11:23 AM	4.53	37.11	41.86	10.61
11:24 AM	4.54	37.48	41.68	9.75
11:25 AM	4.56	37.84	41.74	9.98
11:26 AM	4.53	37.96	41.35	7.23
11:27 AM	4.52	37.90	39.24	13.30
11:28 AM	4.50	37.84	37.88	8.74
11:29 AM	4.52	37.85	37.58	9.97
11:30 AM	4.52	37.90	37.58	16.21
<b>Average</b>	4.49	38.51	39.31	10.26

Signature

( Miss Katesarin Vorradetwittaya )

Environmental Scientist

# PTT Global Chemical Public Company Limited

## EMISSION TEST RESULT

**Date:** August 14, 2025  
**Start time:** 11:31 AM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**SO<sub>2</sub> instrument Model:** TELEDYNE 100 EH  
**CO instrument Model:** API 300 A  
**Fuel Type :** Fuel Gas and Fuel Oil

**Run # : 2**  
**Location :** Main Stack  
**Finish time :** 11:51 AM  
**Serial No.:** 071023-47  
**Serial No.:** 435  
**Serial No.:** 186  
**Serial No.:** 1070  
**Test Operator :** Song H.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	SO <sub>2</sub> (ppm)	CO (ppm)
11:31 AM	4.37	37.87	37.36	9.81
11:32 AM	4.35	37.65	37.20	13.17
11:33 AM	4.38	37.51	36.87	14.25
11:34 AM	4.25	37.69	36.04	9.00
11:35 AM	4.45	38.08	35.70	9.22
11:36 AM	4.48	38.12	36.13	9.11
11:37 AM	4.47	38.87	37.06	11.25
11:38 AM	4.36	38.72	36.82	11.79
11:39 AM	4.26	38.50	37.12	8.43
11:40 AM	4.23	38.40	37.15	9.23
11:41 AM	4.43	38.62	37.15	9.90
11:42 AM	4.37	38.90	37.56	7.27
11:43 AM	4.39	38.92	37.46	11.37
11:44 AM	4.32	38.68	37.53	7.51
11:45 AM	4.26	38.42	37.24	10.77
11:46 AM	4.34	38.35	37.04	10.85
11:47 AM	4.39	38.53	37.14	11.35
11:48 AM	4.41	38.88	37.46	9.72
11:49 AM	4.27	39.00	37.56	9.61
11:50 AM	4.37	38.96	37.41	9.57
11:51 AM	4.25	38.85	37.08	10.32
<b>Average</b>	4.35	38.45	37.05	10.17

Signature

( Miss Katesarin Vorradetwittaya )

Environmental Scientist

# PTT Global Chemical Public Company Limited

## EMISSION TEST RESULT

**Date:** August 14, 2025  
**Start time:** 11:52 AM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**SO<sub>2</sub> instrument Model:** TELEDYNE 100 EH  
**CO instrument Model:** API 300 A  
**Fuel Type :** Fuel Gas and Fuel Oil

**Run # : 3**  
**Location :** Main Stack  
**Finish time :** 12:12 PM  
**Serial No.:** 071023-47  
**Serial No.:** 435  
**Serial No.:** 186  
**Serial No.:** 1070  
**Test Operator :** Song H.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	SO <sub>2</sub> (ppm)	CO (ppm)
11:52 AM	4.36	38.63	36.99	7.12
11:53 AM	4.35	38.62	37.65	10.30
11:54 AM	4.24	38.59	37.78	11.18
11:55 AM	4.38	38.36	38.11	10.89
11:56 AM	4.32	38.05	38.94	9.93
11:57 AM	4.62	37.79	38.43	9.46
11:58 AM	4.36	37.84	38.06	9.65
11:59 AM	4.39	37.85	38.60	10.55
12:00 PM	4.25	37.84	38.37	8.09
12:01 PM	4.44	37.75	38.05	11.66
12:02 PM	4.38	37.60	38.17	10.66
12:03 PM	4.51	38.79	38.35	8.57
12:04 PM	4.31	38.57	38.02	9.32
12:05 PM	4.48	38.81	38.19	10.20
12:06 PM	4.47	37.60	38.51	9.16
12:07 PM	4.36	37.57	38.74	11.37
12:08 PM	4.42	37.35	39.11	10.51
12:09 PM	4.21	38.65	39.64	9.04
12:10 PM	4.42	38.72	39.70	9.12
12:11 PM	4.47	37.25	39.63	8.47
12:12 PM	4.48	38.62	39.75	11.58
<b>Average</b>	4.39	38.14	38.51	9.85

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิมลคลองประปา 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

### STACK EMISSION ANALYSIS REPORT

**CLIENT NAME :** PTT Global Chemical Public Co., Ltd. **REFERENCE NO. :** 225010-Stack-2508-0003  
**Branch 6 (Refinery)**  
**SAMPLING BY :** SECOT Co., Ltd. **SAMPLING DATE :** 15/08/2025  
**SAMPLING TIME :** 10:40-11:52 a.m. **RECEIVED DATE :** 19/08/2025  
**ANALYTICAL DATE :** 22/08/2025 **REPORT DATE :** 01/09/2025  
**STACK LOCATION :** CRS Stack **FUEL TYPE :** Fuel gas  
**SOURCE DESCRIPTION :** Combustion **SAMPLE CONDITION :** Normal  
**OPERATOR :** Mr. Pisanu Seenampeng

#### STACK DESCRIPTION

**Height :** 100.0 m **Flow rate<sup>1/</sup> :** 232.7 Ncu.m/min  
**Diameter :** 1.66 m **Excess Oxygen :** 4.0 %  
**Temperature :** 158.5 °C **Moisture Content :** 13.5 %  
**Gas Velocity :** 3.0 m/s

PARAMETER	UNIT	ND	RESULTS		ASSIGN	STANDARD <sup>3/</sup>	REFERENCE
		Non-detectable	4.0%O <sub>2</sub>	7%O <sub>2</sub>	VALUE <sup>2/</sup>		
TVOC	ppm	-	2.60	2.13	-	-	US. EPA Method 25A
	g/s	-	-	0.02	-	-	

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Narisara Poowasanpeth

(Miss Narisara Poowasanpeth)

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. <sup>1/</sup> At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>2/</sup> The assign value in EIA report.

5. <sup>3/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.



บริษัท ซีคอต จำกัด  
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

STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 225010-CEMs-2508-0003
	Branch 6 (Refinery)		
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 7-239
SAMPLING DATE	: 15/08/2025	SAMPLING TIME	: 10.40-11.52 a.m.
RECEIVED DATE	: 25/08/2025	ANALYTICAL DATE	: 28/08/2025-11/09/2025
REPORT DATE	: 12/09/2025	OPERATOR	: Mr. Pisanu Seenampeng (7-239-0-0029)
STACK LOCATION	: CRS Stack	FUEL TYPE	: Fuel Gas
SOURCE DESCRIPTION	: Combustion	SAMPLE CONDITION	: Normal

STACK DESCRIPTION

Height	: 100.0	m	Flow Rate*	: 232.7	Ncu.m/min
Diameter	: 1.66	m	Excess Oxygen	: 4.0	%
Temperature	: 158.5	°C	Moisture Content	: 13.5	%
Gas Velocity	: 3.0	m/s			

PARAMETER	RESULT*		STANDARD <sup>1/</sup> / EIA <sup>2/</sup>	EMISSION RATE		REFERENCE  METHOD
	ppm		ppm	g/s		
	4.0%O <sub>2</sub>	7%O <sub>2</sub>	7%O <sub>2</sub>	RESULT	EIA <sup>2/</sup>	
Sulfur Dioxide (SO <sub>2</sub> )	3.37	2.77	60/3.5	0.034	0.200	US.EPA Method 6C
Oxide of Nitrogen (NOx)	27.88	22.87	200/60	0.203	2.404	US.EPA Method 7E
Carbon Monoxide (CO)	1.08	0.89	690/690	0.005	16.826	US.EPA Method 10

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. 7-239-0-0006

(Miss Preeda Somjai)

Technical Management Team

REG.NO. 7-239-0-0006

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

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

3. \* At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.

5. <sup>2/</sup> The assigned value is specified in EIA report.

The Monitoring Result of Emission Concentration  
CRS Stack  
PTT Global Chemical Public Company Limited  
August 15, 2025

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	3.92	3.87	27.38	27.37	22.34
2	3.98	3.93	27.84	27.83	22.80
3	4.12	4.06	28.44	28.43	23.47
Average	4.01	3.95	27.89	27.88	22.87

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	3.92	3.87	3.12	3.09	2.52
2	3.98	3.93	3.45	3.43	2.81
3	4.12	4.06	3.62	3.60	2.97
Average	4.01	3.95	3.40	3.37	2.77

Run Number	Oxygen content (%)		Carbonmonoxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	3.92	3.87	1.33	1.28	1.04
2	3.98	3.93	1.17	1.13	0.93
3	4.12	4.06	0.88	0.84	0.69
Average	4.01	3.95	1.12	1.08	0.89

# PTT Global Chemical Public Company Limited EMISSION TEST RESULT

**Date:** August 15, 2025  
**Start time:** 10:50 AM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** Teledyne 200 EM  
**SO<sub>2</sub> instrument Model:** API 100 AH  
**CO instrument Model:** THERMO 48 C  
**Fuel Type :** Fuel Gas

**Run # : 1**  
**Location :** CRS Stack  
**Finish time :** 11:10 AM  
**Serial No.:** 161212-14  
**Serial No.:** 433  
**Serial No.:** 118  
**Serial No.:** 0412106049  
**Test Operator :** Pisanu S.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	SO <sub>2</sub> (ppm)	CO (ppm)
10:50 AM	4.21	26.63	2.83	1.23
10:51 AM	4.11	27.06	2.84	1.31
10:52 AM	4.00	27.09	2.88	1.03
10:53 AM	3.85	26.83	2.93	1.43
10:54 AM	3.82	26.89	2.98	1.07
10:55 AM	3.98	26.92	2.88	1.40
10:56 AM	4.07	27.36	2.92	1.90
10:57 AM	3.99	27.68	2.96	1.50
10:58 AM	3.90	27.73	3.10	1.90
10:59 AM	3.89	27.70	3.14	1.90
11:00 AM	3.77	27.67	3.12	1.30
11:01 AM	3.74	27.52	3.20	0.60
11:02 AM	3.83	27.34	3.27	0.60
11:03 AM	3.84	27.42	3.27	1.30
11:04 AM	3.77	27.46	3.26	1.60
11:05 AM	3.80	27.44	3.35	0.20
11:06 AM	3.82	27.45	3.39	1.00
11:07 AM	3.88	27.49	3.35	2.00
11:08 AM	4.01	27.57	3.31	1.90
11:09 AM	4.10	27.83	3.27	1.60
11:10 AM	3.97	27.96	3.17	1.20
<b>Average</b>	3.92	27.38	3.12	1.33

Signature

( Miss Katesarin Vorradetwittaya )

Environmental Scientist

# PTT Global Chemical Public Company Limited EMISSION TEST RESULT

**Date:** August 15, 2025  
**Start time:** 11:11 AM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** Teledyne 200 EM  
**SO<sub>2</sub> instrument Model:** API 100 AH  
**CO instrument Model:** THERMO 48 C  
**Fuel Type :** Fuel Gas

**Run # : 2**  
**Location :** CRS Stack  
**Finish time :** 11:31 AM  
**Serial No.:** 161212-14  
**Serial No.:** 433  
**Serial No.:** 118  
**Serial No.:** 0412106049  
**Test Operator :** Pisanu S.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	SO <sub>2</sub> (ppm)	CO (ppm)
11:11 AM	3.89	27.87	3.21	0.50
11:12 AM	3.88	27.73	3.27	0.80
11:13 AM	3.82	27.64	3.33	1.50
11:14 AM	3.95	27.55	3.37	1.30
11:15 AM	4.01	27.67	3.36	1.10
11:16 AM	3.99	27.93	3.44	1.70
11:17 AM	3.91	27.98	3.41	0.60
11:18 AM	3.92	27.88	3.50	1.70
11:19 AM	3.79	27.70	3.40	1.70
11:20 AM	3.94	27.48	3.49	1.60
11:21 AM	4.07	27.51	3.61	2.10
11:22 AM	4.13	27.79	3.55	0.40
11:23 AM	4.16	28.06	3.43	2.60
11:24 AM	3.97	28.03	3.46	2.60
11:25 AM	3.88	27.84	3.50	0.30
11:26 AM	3.93	27.66	3.53	0.60
11:27 AM	4.06	27.69	3.51	0.30
11:28 AM	4.16	28.02	3.51	0.80
11:29 AM	4.15	28.31	3.48	1.60
11:30 AM	4.04	28.33	3.52	0.10
11:31 AM	3.99	28.03	3.56	0.60
<b>Average</b>	3.98	27.84	3.45	1.17

Signature

( Miss Katesarin Vorradetwittaya )

Environmental Scientist

# PTT Global Chemical Public Company Limited

## EMISSION TEST RESULT

**Date:** August 15, 2025  
**Start time:** 11:32 AM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** Teledyne 200 EM  
**SO<sub>2</sub> instrument Model:** API 100 AH  
**CO instrument Model:** THERMO 48 C  
**Fuel Type :** Fuel Gas

**Run # :** 3  
**Location :** CRS Stack  
**Finish time :** 11:52 AM  
**Serial No.:** 161212-14  
**Serial No.:** 433  
**Serial No.:** 118  
**Serial No.:** 0412106049  
**Test Operator :** Pisanu S.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	SO <sub>2</sub> (ppm)	CO (ppm)
11:32 AM	3.90	27.74	3.39	0.90
11:33 AM	3.97	27.67	3.42	0.30
11:34 AM	4.03	27.82	3.38	0.80
11:35 AM	4.07	27.98	3.43	0.30
11:36 AM	4.08	28.14	3.58	1.40
11:37 AM	3.98	28.11	3.58	0.30
11:38 AM	3.93	27.94	3.64	0.10
11:39 AM	4.06	27.86	3.62	0.40
11:40 AM	4.14	27.97	3.58	0.40
11:41 AM	4.13	28.16	3.54	1.60
11:42 AM	4.18	28.26	3.44	1.10
11:43 AM	4.19	28.26	3.60	0.70
11:44 AM	4.22	28.28	3.71	0.60
11:45 AM	4.15	28.37	3.57	1.60
11:46 AM	4.23	28.36	3.48	0.60
11:47 AM	4.36	27.93	3.39	0.10
11:48 AM	4.26	30.02	3.87	0.80
11:49 AM	4.16	29.76	3.94	2.10
11:50 AM	4.06	29.62	4.03	1.80
11:51 AM	4.10	29.42	3.94	0.30
11:52 AM	4.23	29.50	3.99	2.20
Average	4.12	28.44	3.62	0.88

Signature

( Miss Katesarin Vorradetwittaya )

Environmental Scientist



บริษัท ซีคอต จำกัด  
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

### STACK EMISSION ANALYSIS REPORT

**CLIENT NAME :** PTT Global Chemical Public Co., Ltd. **REFERENCE NO. :** 225010-Stack-2508-0003  
**Branch 6 (Refinery)**  
**SAMPLING BY :** SECOT Co., Ltd. **SAMPLING DATE :** 18/08/2025  
**SAMPLING TIME :** 02.00-03.12 p.m. **RECEIVED DATE :** 19/08/2025  
**ANALYTICAL DATE :** 22/08/2025 **REPORT DATE :** 01/09/2025  
**STACK LOCATION :** HCU Stack **FUEL TYPE :** Fuel gas  
**SOURCE DESCRIPTION :** Combustion **SAMPLE CONDITION :** Normal  
**OPERATOR :** Mr. Song Hengchwanikul

### STACK DESCRIPTION

**Height :** 61.0 m **Flow rate<sup>1/</sup> :** 553 Ncu.m/min  
**Diameter :** 1.7 m **Excess Oxygen :** 2.1 %  
**Temperature :** 245 °C **Moisture Content :** 12.9 %  
**Gas Velocity :** 8.1 m/s

PARAMETER	UNIT	ND	RESULTS		ASSIGN	STANDARD <sup>3/</sup>	REFERENCE
		Non-detectable	2.1%O <sub>2</sub>	7%O <sub>2</sub>	VALUE <sup>2/</sup>		
TVOC	ppm	-	3.85	2.85	-	-	US. EPA Method 25A
	g/s	-	-	0.064	-	-	

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Mainu Pawasapetch

(Miss Narisa Poowasanetch)

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. <sup>1/</sup> At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>2/</sup> The assign value in EIA report.

5. <sup>3/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.



บริษัท ซีคอต จำกัด  
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

STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 225010-CEMs-2508-0003
	Branch 6 (Refinery)		
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 2-239
SAMPLING DATE	: 18/08/2025	SAMPLING TIME	: 02.00-03.12 p.m.
RECEIVED DATE	: 25/08/2025	ANALYTICAL DATE	: 28/08/2025-11/09/2025
REPORT DATE	: 12/09/2025	OPERATOR	: Mr. Song Hengchwankul (2-239-0-0016)
STACK LOCATION	: HCU Stack	FUEL TYPE	: Fuel Gas
SOURCE DESCRIPTION	: Combustion	SAMPLE CONDITION	: Normal
STACK DESCRIPTION			
Height	: 61.0 m	Flow Rate*	: 552.7 Ncu.m/min
Diameter	: 1.7 m	Excess Oxygen	: 2.1 %
Temperature	: 245.0 °C	Moisture Content	: 12.9 %
Gas Velocity	: 8.1 m/s		

PARAMETER	RESULT*		STANDARD <sup>1/</sup> / EIA <sup>2/</sup>	EMISSION RATE		REFERENCE METHOD
	ppm		ppm	g/s		
	2.1%O <sub>2</sub>	7%O <sub>2</sub>	7%O <sub>2</sub>	RESULT	EIA <sup>2/</sup>	
Oxide of Nitrogen (NOx)	42.00	31.09	200/180	0.728	1.070	US.EPA Method 7E
Carbon Monoxide (CO)	0.82	0.60	690/690	0.009	6.727	US.EPA Method 10

  
(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. 2-239-0-0006

  
(Miss Preeda Somjai)

Technical Management Team

REG.NO. 2-239-0-0006

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

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

3. \* At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.

5. <sup>2/</sup> The assigned value is specified in EIA report.

MTR HCU Stack (NOx+CO)/Sum/11/09/25

The Monitoring Result of Emission Concentration  
HCU Stack  
PTT Global Chemical Public Company Limited  
August 18, 2025

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	2.21	2.18	40.09	40.09	29.77
2	2.10	2.07	43.32	43.33	31.99
3	2.16	2.13	42.56	42.57	31.52
Average	2.16	2.13	41.99	42.00	31.09

Run Number	Oxygen content (%)		Carbonmonoxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	2.21	2.18	0.85	0.79	0.59
2	2.10	2.07	0.88	0.83	0.61
3	2.16	2.13	0.87	0.83	0.61
Average	2.16	2.13	0.87	0.82	0.60

# PTT Global Chemical Public Company Limited

## EMISSION TEST RESULT

**Date:** August 18, 2025  
**Start time:** 2:10 PM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**CO instrument Model:** API 300 A  
**Fuel Type :** Fuel Gas

**Run # : 1**  
**Location :** HCU Stack  
**Finish time :** 2:30 PM  
**Serial No.:** 071023-47  
**Serial No.:** 435  
**Serial No.:** 1070  
**Test Operator :** Song H.

Time, min	O <sub>2</sub> (%)	NOx (ppm)	CO (ppm)
2:10 PM	2.12	40.23	0.82
2:11 PM	2.09	40.73	0.81
2:12 PM	2.18	40.43	0.86
2:13 PM	2.02	39.91	0.82
2:14 PM	2.10	39.62	0.81
2:15 PM	2.15	39.78	0.87
2:16 PM	2.12	40.11	0.82
2:17 PM	2.15	40.12	0.86
2:18 PM	2.20	39.74	0.87
2:19 PM	2.15	39.80	0.81
2:20 PM	2.17	40.06	0.87
2:21 PM	2.21	40.08	0.87
2:22 PM	2.18	40.20	0.87
2:23 PM	2.17	40.82	0.87
2:24 PM	2.27	41.04	0.86
2:25 PM	2.35	40.37	0.87
2:26 PM	2.35	39.85	0.88
2:27 PM	2.35	39.81	0.86
2:28 PM	2.35	39.72	0.88
2:29 PM	2.35	39.63	0.83
2:30 PM	2.37	39.93	0.88
<b>Average</b>	2.21	40.09	0.85

Signature   
 ( Miss Katesarin Vorradetwittaya )  
 Environmental Scientist

# PTT Global Chemical Public Company Limited

## EMISSION TEST RESULT

**Date:** August 18, 2025  
**Start time:** 2:31 PM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**CO instrument Model:** API 300 A  
**Fuel Type :** Fuel Gas

**Run # : 2**  
**Location :** HCU Stack  
**Finish time :** 2:51 PM  
**Serial No.:** 071023-47  
**Serial No.:** 435  
**Serial No.:** 1070  
**Test Operator :** Song H.

Time, min	O <sub>2</sub> (%)	NOx (ppm)	CO (ppm)
2:31 PM	2.22	40.90	0.88
2:32 PM	2.14	41.35	0.88
2:33 PM	2.07	41.45	0.88
2:34 PM	2.08	42.50	0.88
2:35 PM	2.05	43.57	0.88
2:36 PM	2.03	43.86	0.88
2:37 PM	2.22	44.11	0.88
2:38 PM	2.18	44.26	0.88
2:39 PM	2.14	43.96	0.89
2:40 PM	2.15	43.84	0.89
2:41 PM	2.14	43.75	0.89
2:42 PM	2.09	43.52	0.89
2:43 PM	2.08	43.12	0.89
2:44 PM	2.09	43.30	0.89
2:45 PM	2.07	43.76	0.84
2:46 PM	2.09	43.63	0.87
2:47 PM	2.09	43.57	0.85
2:48 PM	2.00	43.80	0.89
2:49 PM	2.08	43.84	0.89
2:50 PM	2.05	43.82	0.89
2:51 PM	2.08	43.71	0.88
<b>Average</b>	2.10	43.32	0.88

Signature   
 ( Miss Katesarin Vorradetwittaya )  
 Environmental Scientist

# PTT Global Chemical Public Company Limited

## EMISSION TEST RESULT

**Date:** August 18, 2025  
**Start time:** 2:52 PM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**CO instrument Model:** API 300 A  
**Fuel Type:** Fuel Gas

**Run #:** 3  
**Location:** HCU Stack  
**Finish time:** 3:12 PM  
**Serial No.:** 071023-47  
**Serial No.:** 435  
**Serial No.:** 1070  
**Test Operator:** Song H.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	CO (ppm)
2:52 PM	2.11	43.34	0.88
2:53 PM	2.09	43.32	0.85
2:54 PM	2.04	43.24	0.83
2:55 PM	2.01	43.28	0.88
2:56 PM	2.01	43.37	0.88
2:57 PM	2.01	42.92	0.88
2:58 PM	2.03	42.55	0.88
2:59 PM	2.00	42.62	0.88
3:00 PM	2.07	42.93	0.89
3:01 PM	2.33	43.23	0.89
3:02 PM	2.08	43.36	0.89
3:03 PM	2.33	43.42	0.88
3:04 PM	2.32	43.49	0.88
3:05 PM	2.25	43.28	0.85
3:06 PM	2.24	42.23	0.86
3:07 PM	2.26	41.21	0.85
3:08 PM	2.28	40.88	0.88
3:09 PM	2.26	41.07	0.88
3:10 PM	2.17	41.15	0.88
3:11 PM	2.22	41.36	0.88
3:12 PM	2.22	41.45	0.88
Average	2.16	42.56	0.87

Signature



( Miss Katesarin Vorradetwittaya )

Environmental Scientist



บริษัท ซีคอต จำกัด

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

### STACK EMISSION ANALYSIS REPORT

**CLIENT NAME** : PTT Global Chemical Public Co., Ltd. **REFERENCE NO.** : 225010-Stack-2508-0003  
 Branch 6 (Refinery)  
**SAMPLING BY** : SECOT Co., Ltd. **SAMPLING DATE** : 15/08/2025  
**SAMPLING TIME** : 02.15-03.22 p.m. **RECEIVED DATE** : 19/08/2025  
**ANALYTICAL DATE** : 22/08/2025 **REPORT DATE** : 01/09/2025  
**STACK LOCATION** : HMU Stack **FUEL TYPE** : Fuel gas  
**SOURCE DESCRIPTION** : Combustion **SAMPLE CONDITION** : Normal  
**OPERATOR** : Mr. Song Henghchwankul

#### STACK DESCRIPTION

**Height** : 60.0 m **Flow rate<sup>1/</sup>** : 2,704 Ncu.m/min  
**Diameter** : 2.4 m **Excess Oxygen** : 4.7 %  
**Temperature** : 183 °C **Moisture Content** : 13.1 %  
**Gas Velocity** : 17.6 m/s

PARAMETER	UNIT	ND	RESULTS		ASSIGN	STANDARD <sup>3/</sup>	REFERENCE
		Non-detectable	4.7%O <sub>2</sub>	7%O <sub>2</sub>	VALUE <sup>2/</sup>		
TVOC	ppm	-	3.51	3.00	-	-	US, EPA Method 25A
	g/s	-	-	0.285	-	-	

Sudaporn S.

(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. <sup>1/</sup> At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>2/</sup> The assign value in EIA report.

5. <sup>3/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.



บริษัท ซีคอต จำกัด

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

### STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 225010-CEMs-2508-0003
	Branch 6 (Refinery)		
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 7-239
SAMPLING DATE	: 15/08/2025	SAMPLING TIME	: 02.15-03.22 p.m.
RECEIVED DATE	: 25/08/2025	ANALYTICAL DATE	: 28/08/2025-11/09/2025
REPORT DATE	: 12/09/2025	OPERATOR	: Mr. Song Hengchwankul (7-239-0-0016)
STACK LOCATION	: HMU Stack	FUEL TYPE	: Fuel Gas
SOURCE DESCRIPTION	: Combustion	SAMPLE CONDITION	: Normal

#### STACK DESCRIPTION

Height	: 60.0	m	Flow Rate*	: 2,704	Ncu.m/min
Diameter	: 2.4	m	Excess Oxygen	: 4.7	%
Temperature	: 182.6	°C	Moisture Content	: 13.1	%
Gas Velocity	: 17.6	m/s			

PARAMETER	RESULT*		STANDARD <sup>1/</sup> / EIA <sup>2/</sup>	EMISSION RATE		REFERENCE METHOD
	ppm		ppm	g/s		
	4.7%O <sub>2</sub>	7%O <sub>2</sub>	7%O <sub>2</sub>	RESULT	EIA <sup>2/</sup>	
Oxide of Nitrogen (NOx)	31.31	26.78	200/180	2.654	4.450	US.EPA Method 7E
Carbon Monoxide (CO)	0.47	0.40	690/690	0.024	44.879	US.EPA Method 10

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. 7-239-0-0006

(Miss Preeda Somjai)

Technical Management Team

REG.NO. 7-239-0-0006

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

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

3. \* At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.

5. <sup>2/</sup> The assigned value is specified in EIA report.

MTR HMU Stack (NOx+CO)/Sum 1/17/09/25

## The Monitoring Result of Emission Concentration HMU Stack PTT Global Chemical Public Company Limited August 15, 2025

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	4.66	4.66	30.92	30.91	26.46
2	4.66	4.64	31.61	31.60	27.01
3	4.68	4.65	31.44	31.43	26.88
Average	4.67	4.65	31.32	31.31	26.78

Run Number	Oxygen content (%)		Carbonmonoxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	4.66	4.66	0.45	0.40	0.34
2	4.66	4.64	0.54	0.50	0.43
3	4.68	4.65	0.54	0.5	0.43
Average	4.67	4.65	0.51	0.47	0.40

## PTT Global Chemical Public Company Limited EMISSION TEST RESULT

**Date:** August 15, 2025  
**Start time:** 2:20 PM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**CO instrument Model:** API 300 A  
**Fuel Type :** Fuel Gas

**Run # : 1**  
**Location :** HMU Stack  
**Finish time :** 2:40 PM  
**Serial No.:** 071023-47  
**Serial No.:** 435  
**Serial No.:** 1070  
**Test Operator :** Song H.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	CO (ppm)
2:20 PM	4.61	30.36	0.44
2:21 PM	4.59	30.64	0.44
2:22 PM	4.53	30.93	0.44
2:23 PM	4.57	30.71	0.44
2:24 PM	4.54	30.25	0.44
2:25 PM	4.61	30.19	0.44
2:26 PM	4.83	30.48	0.44
2:27 PM	4.72	30.52	0.44
2:28 PM	4.64	30.34	0.44
2:29 PM	4.67	30.37	0.44
2:30 PM	4.70	30.39	0.44
2:31 PM	4.65	30.70	0.44
2:32 PM	4.72	31.04	0.44
2:33 PM	4.72	31.00	0.44
2:34 PM	4.75	31.18	0.44
2:35 PM	4.69	31.62	0.52
2:36 PM	4.69	31.75	0.46
2:37 PM	4.74	31.79	0.44
2:38 PM	4.74	31.65	0.44
2:39 PM	4.52	31.72	0.45
2:40 PM	4.71	31.78	0.55
<b>Average</b>	4.66	30.92	0.45

Signature

( Miss Katesarin Vorradetwittaya )

Environmental Scientist

## PTT Global Chemical Public Company Limited EMISSION TEST RESULT

**Date:** August 15, 2025  
**Start time:** 2:41 PM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**CO instrument Model:** API 300 A  
**Fuel Type :** Fuel Gas

**Run # : 2**  
**Location :** HMU Stack  
**Finish time :** 3:01 PM  
**Serial No.:** 071023-47  
**Serial No.:** 435  
**Serial No.:** 1070  
**Test Operator :** Song H.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	CO (ppm)
2:41 PM	4.59	31.74	0.55
2:42 PM	4.53	32.13	0.55
2:43 PM	4.63	32.25	0.55
2:44 PM	4.56	31.91	0.55
2:45 PM	4.85	31.67	0.55
2:46 PM	4.82	31.70	0.55
2:47 PM	4.75	31.76	0.55
2:48 PM	4.93	31.52	0.55
2:49 PM	4.74	31.45	0.46
2:50 PM	4.83	31.44	0.48
2:51 PM	4.55	31.36	0.55
2:52 PM	4.66	31.45	0.55
2:53 PM	4.50	31.54	0.55
2:54 PM	4.60	31.25	0.55
2:55 PM	4.48	31.24	0.55
2:56 PM	4.56	31.48	0.55
2:57 PM	4.58	31.49	0.55
2:58 PM	4.70	31.55	0.55
2:59 PM	4.64	31.58	0.55
3:00 PM	4.65	31.77	0.55
3:01 PM	4.64	31.60	0.49
<b>Average</b>	4.66	31.61	0.54

Signature

( Miss Katesarin Vorradetwittaya )

Environmental Scientist

# PTT Global Chemical Public Company Limited

## EMISSION TEST RESULT

**Date:** August 15, 2025  
**Start time:** 3:02 PM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**CO instrument Model:** API 300 A  
**Fuel Type:** Fuel Gas

**Run #:** 3  
**Location:** HMU Stack  
**Finish time:** 3:22 PM  
**Serial No.:** 071023-47  
**Serial No.:** 435  
**Serial No.:** 1070  
**Test Operator:** Song H.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	CO (ppm)
3:02 PM	4.42	31.76	0.43
3:03 PM	4.64	32.10	0.45
3:04 PM	4.72	31.91	0.55
3:05 PM	4.87	31.44	0.55
3:06 PM	4.80	31.30	0.55
3:07 PM	4.54	31.40	0.55
3:08 PM	4.67	31.34	0.55
3:09 PM	4.84	31.17	0.55
3:10 PM	4.82	31.16	0.55
3:11 PM	4.65	31.19	0.55
3:12 PM	4.53	31.22	0.55
3:13 PM	4.87	31.38	0.55
3:14 PM	4.54	31.24	0.55
3:15 PM	4.82	31.08	0.55
3:16 PM	4.75	31.33	0.55
3:17 PM	4.50	31.54	0.55
3:18 PM	4.59	31.50	0.55
3:19 PM	4.62	31.35	0.55
3:20 PM	4.66	31.50	0.55
3:21 PM	4.72	31.63	0.55
3:22 PM	4.65	31.61	0.55
<b>Average</b>	4.68	31.44	0.54

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist



บริษัท ซีคอต จำกัด  
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

### STACK EMISSION ANALYSIS REPORT

**CLIENT NAME** : PTT Global Chemical Public Co., Ltd. **REFERENCE NO.** : 225010-Stack-2508-0003  
**Branch** : Branch 6 (Refinery)  
**SAMPLING BY** : SECOT Co., Ltd. **SAMPLING DATE** : 15/08/2025  
**SAMPLING TIME** : 11.00 a.m.-01.00 p.m. **RECEIVED DATE** : 19/08/2025  
**ANALYTICAL DATE** : 22/08/2025 **REPORT DATE** : 01/09/2025  
**STACK LOCATION** : DHDS Stack **FUEL TYPE** : Fuel gas  
**SOURCE DESCRIPTION** : Combustion **SAMPLE CONDITION** : Normal  
**OPERATOR** : Mr. Song Hengchawankul

#### STACK DESCRIPTION

**Height** : 80.0 m **Flow rate<sup>1/</sup>** : 227.4 Ncu.m/min  
**Diameter** : 1.2 m **Excess Oxygen** : 6.2 %  
**Temperature** : 174.6 °C **Moisture Content** : 11.1 %  
**Gas Velocity** : 5.7 m/s

PARAMETER	UNIT	ND	RESULTS		ASSIGN	STANDARD <sup>3/</sup>	REFERENCE
		Non-detectable	6.2%O <sub>2</sub>	7%O <sub>2</sub>	VALUE <sup>2/</sup>		
TVOC	ppm	-	1.49	1.41	-	-	US. EPA Method 25A
	g/s	-	-	0.010	-	-	

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Maun 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. <sup>1/</sup> At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>2/</sup> The assign value in EIA report.

5. <sup>3/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิมลคลองประปา 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

### STACK EMISSION ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REFERENCE NO. : 225010-Stack-2508-0003  
Branch 6 (Refinery)  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION NO. : 2-239  
SAMPLING DATE : 15/08/2025 SAMPLING TIME : 11.00 a.m.-01.00 p.m.  
RECEIVED DATE : 19/08/2025 ANALYTICAL DATE : 20-26/08/2025  
REPORT DATE : 01/09/2025 OPERATOR : Mr. Song Hengchawankul (2-239-0-0016)  
STACK LOCATION : DHDS Stack FUEL TYPE : Fuel gas and Fuel Oil  
SOURCE DESCRIPTION : Combustion SAMPLE CONDITION : Normal

#### STACK DESCRIPTION

Height : 80.0 m Flow rate<sup>1/</sup> : 227.4 Ncu.m/min  
Diameter : 1.2 m Excess Oxygen : 6.2 %  
Temperature : 174.6 °C Moisture Content : 11.1 %  
Gas Velocity : 5.7 m/s

PARAMETER	UNIT	ND	RESULTS		ASSIGN	STANDARD <sup>3/</sup>	REFERENCE METHODS
		Non-detectable	6.2%O <sub>2</sub>	7%O <sub>2</sub>	VALUE <sup>2/</sup>		
Lead	mg/m <sup>3</sup>	<0.02	ND	ND	5.0	-	US. EPA Method 29
	g/s	-	-	<0.0001	0.050	-	
Mercury	mg/m <sup>3</sup>	<0.0003	ND	ND	2.4	-	US. EPA Method 29
	g/s	-	-	<0.000001	0.024	-	

(Mrs. Araya Tipparuk)

Analyst

REG.NO.2-239-0-0004

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.2-239-0-0010

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

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

3. <sup>1/</sup> At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>2/</sup> The assign value in EIA report.

5. <sup>3/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิมลคลองประปา 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

### STACK EMISSION ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REFERENCE NO. : 225010-CEMS-2508-0003  
Branch 6 (Refinery)  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION NO. : 2-239  
SAMPLING DATE : 15/08/2025 SAMPLING TIME : 11.00 a.m.-01.00 p.m.  
RECEIVED DATE : 25/08/2025 ANALYTICAL DATE : 28/08/2025-11/09/2025  
REPORT DATE : 12/09/2025 OPERATOR : Mr. Song Hengchawankul (2-239-0-0016)  
STACK LOCATION : DHDS Stack FUEL TYPE : Fuel gas and Fuel Oil  
SOURCE DESCRIPTION : Combustion SAMPLE CONDITION : Normal

#### STACK DESCRIPTION

Height : 80.0 m Flow Rate\* : 227.4 Ncu.m/min  
Diameter : 1.2 m Excess Oxygen : 6.2 %  
Temperature : 174.6 °C Moisture Content : 11.1 %  
Gas Velocity : 5.7 m/s

PARAMETER	RESULT*		STANDARD <sup>1/</sup> / EIA <sup>2/</sup>		EMISSION RATE		REFERENCE  METHOD
	ppm		ppm		g/s		
	6.2%O <sub>2</sub>	7%O <sub>2</sub>	7%O <sub>2</sub>		RESULT	EIA <sup>2/</sup>	
Sulfur Dioxide (SO <sub>2</sub> )	1.07	1.01	950/120		0.011	3.114	US.EPA Method 6C
Oxide of Nitrogen (NOx)	25.45	24.10	200/50		0.182	0.933	US.EPA Method 7E
Carbon Monoxide (CO)	0.28	0.27	690/690		0.001	7.834	US.EPA Method 10

(Miss Katesarin Vorradeewittaya)

Environmental Scientist

REG.NO. 2-239-0-0006

(Miss Preeda Somjai)

Technical Management Team

REG.NO. 2-239-0-0006

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

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

3. \* At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.

5. <sup>2/</sup> The assigned value is specified in EIA report.

**The Monitoring Result of Emission Concentration**  
**DHDS Stack**  
**PTT Global Chemical Public Company Limited**  
**August 15, 2025**

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	6.18	6.12	25.19	25.17	23.67
2	6.48	6.45	25.24	25.22	24.26
3	6.08	6.08	25.98	25.97	24.36
<b>Average</b>	<b>6.25</b>	<b>6.22</b>	<b>25.47</b>	<b>25.45</b>	<b>24.10</b>

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	6.18	6.12	0.97	0.90	0.85
2	6.48	6.45	1.07	1.02	0.98
3	6.08	6.08	1.31	1.28	1.20
<b>Average</b>	<b>6.25</b>	<b>6.22</b>	<b>1.12</b>	<b>1.07</b>	<b>1.01</b>

Run Number	Oxygen content (%)		Carbonmonoxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	6.18	6.12	0.31	0.28	0.26
2	6.48	6.45	0.31	0.27	0.26
3	6.08	6.08	0.35	0.3	0.28
<b>Average</b>	<b>6.25</b>	<b>6.22</b>	<b>0.32</b>	<b>0.28</b>	<b>0.27</b>

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

Date: August 15, 2025  
 Start time: 10:50 AM  
 O<sub>2</sub> instrument Model: AMI 70  
 NO<sub>x</sub> instrument Model: TELEDYNE 200 EM  
 SO<sub>2</sub> instrument Model: TELEDYNE 100 EH  
 CO instrument Model: API 300 A  
 Fuel Type : Fuel Gas

Run # : 1  
 Location : DHDS Stack  
 Finish time : 11:10 AM  
 Serial No.: 071023-47  
 Serial No.: 435  
 Serial No.: 186  
 Serial No.: 1070  
 Test Operator : Song H.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	SO <sub>2</sub> (ppm)	CO (ppm)
10:50 AM	5.96	26.41	1.03	0.38
10:51 AM	5.88	26.30	1.01	0.44
10:52 AM	5.80	25.99	1.03	0.50
10:53 AM	5.82	25.61	1.00	0.40
10:54 AM	5.92	25.24	0.97	0.36
10:55 AM	6.01	25.14	0.99	0.24
10:56 AM	6.12	25.14	0.99	0.15
10:57 AM	6.14	25.12	1.03	0.37
10:58 AM	6.14	24.87	1.06	0.21
10:59 AM	6.15	24.68	1.03	0.53
11:00 AM	6.15	24.79	1.01	0.30
11:01 AM	6.22	24.99	0.98	0.29
11:02 AM	6.27	24.98	0.98	0.16
11:03 AM	6.29	24.91	0.95	0.09
11:04 AM	6.32	24.83	0.93	0.39
11:05 AM	6.37	24.75	0.92	0.43
11:06 AM	6.39	24.77	0.91	0.01
11:07 AM	6.43	24.85	0.90	0.24
11:08 AM	6.49	25.07	0.89	0.22
11:09 AM	6.52	25.15	0.86	0.38
11:10 AM	6.48	25.30	0.86	0.37
<b>Average</b>	<b>6.18</b>	<b>25.19</b>	<b>0.97</b>	<b>0.31</b>

Signature

( Miss Katesarin Vorradetwittaya )

Environmental Scientist

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

**Date:** August 15, 2025  
**Start time:** 11:11 AM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**SO<sub>2</sub> instrument Model:** TELEDYNE 100 EH  
**CO instrument Model:** API 300 A  
**Fuel Type :** Fuel Gas

**Run # : 2**  
**Location :** DHDS Stack  
**Finish time :** 11:31 AM  
**Serial No.:** 071023-47  
**Serial No.:** 435  
**Serial No.:** 186  
**Serial No.:** 1070  
**Test Operator :** Song H.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	SO <sub>2</sub> (ppm)	CO (ppm)
11:11 AM	6.45	25.26	0.86	0.28
11:12 AM	6.43	25.12	0.91	0.40
11:13 AM	6.45	25.00	0.98	0.10
11:14 AM	6.54	24.99	1.00	0.20
11:15 AM	6.61	25.22	1.02	0.51
11:16 AM	6.62	25.54	0.99	0.40
11:17 AM	6.57	25.82	1.00	0.17
11:18 AM	6.50	25.71	0.87	0.21
11:19 AM	6.47	25.34	1.14	0.31
11:20 AM	6.51	24.98	1.10	0.30
11:21 AM	6.53	24.84	1.06	0.17
11:22 AM	6.52	24.86	1.07	0.23
11:23 AM	6.46	24.76	1.09	0.52
11:24 AM	6.37	24.64	1.13	0.28
11:25 AM	6.34	24.59	1.16	0.43
11:26 AM	6.39	24.82	1.17	0.39
11:27 AM	6.49	25.35	1.18	0.17
11:28 AM	6.54	25.88	1.15	0.24
11:29 AM	6.47	26.05	1.18	0.56
11:30 AM	6.42	25.87	1.16	0.27
11:31 AM	6.36	25.41	1.15	0.36
<b>Average</b>	6.48	25.24	1.07	0.31

Signature

( Miss Katesarin Vorradetwittaya )

Environmental Scientist

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

**Date:** August 15, 2025  
**Start time:** 11:32 AM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**SO<sub>2</sub> instrument Model:** TELEDYNE 100 EH  
**CO instrument Model:** API 300 A  
**Fuel Type :** Fuel Gas

**Run # : 3**  
**Location :** DHDS Stack  
**Finish time :** 11:52 AM  
**Serial No.:** 071023-47  
**Serial No.:** 435  
**Serial No.:** 186  
**Serial No.:** 1070  
**Test Operator :** Song H.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	SO <sub>2</sub> (ppm)	CO (ppm)
11:32 AM	6.33	25.26	1.10	0.22
11:33 AM	6.33	25.45	1.12	0.32
11:34 AM	6.32	25.67	1.14	0.37
11:35 AM	6.30	25.68	1.18	0.26
11:36 AM	6.26	25.63	1.21	0.51
11:37 AM	5.98	25.64	1.24	0.46
11:38 AM	5.97	25.52	1.25	0.50
11:39 AM	6.09	25.37	1.28	0.36
11:40 AM	6.07	25.56	1.26	0.42
11:41 AM	6.06	26.03	1.24	0.34
11:42 AM	5.99	26.22	1.23	0.31
11:43 AM	6.06	26.16	1.23	0.16
11:44 AM	5.97	26.15	1.23	0.45
11:45 AM	5.85	26.21	1.23	0.26
11:46 AM	5.86	26.39	1.27	0.19
11:47 AM	6.02	26.69	1.25	0.45
11:48 AM	6.06	26.72	1.48	0.25
11:49 AM	6.03	26.56	1.67	0.57
11:50 AM	6.03	26.41	1.66	0.22
11:51 AM	6.01	26.23	1.65	0.44
11:52 AM	6.06	26.11	1.64	0.25
<b>Average</b>	6.08	25.98	1.31	0.35

Signature

( Miss Katesarin Vorradetwittaya )

Environmental Scientist



บริษัท ซีคอต จำกัด

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

### STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 225010-CEMs-2508-0003
	Branch 6 (Refinery)		
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 2-239
SAMPLING DATE	: 14/08/2025	SAMPLING TIME	: 02.40-03.42 p.m.
RECEIVED DATE	: 25/08/2025	ANALYTICAL DATE	: 28/08/2025-11/09/2025
REPORT DATE	: 12/09/2025	OPERATOR	: Mr. Pisanu Seenampeng (2-239-0-0029)
STACK LOCATION	: Gas Turbine 1	FUEL TYPE	: Natural Gas
SOURCE DESCRIPTION	: Combustion	SAMPLE CONDITION	: Normal

#### STACK DESCRIPTION

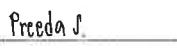
Height	: 60.0	m	Flow Rate <sup>1/</sup>	: 3,027	Neu.m/min
Diameter	: 2.5	m	Excess Oxygen	: 14.0	%
Temperature	: 200.5	°C	Moisture Content	: 10.6	%
Gas Velocity	: 18.4	m/s			

PARAMETER	RESULT*		STANDARD <sup>1/</sup> / EIA <sup>2/</sup>	EMISSION RATE		REFERENCE METHOD
	ppm		ppm	g/s		
	14.0%O <sub>2</sub>	7%O <sub>2</sub>	7%O <sub>2</sub>	RESULT	EIA <sup>2/</sup>	
Oxide of Nitrogen (NOx)	12.52	25.12	200/180	1.188	6.000	US.EPA Method 7E
Carbon Monoxide (CO)	187.10	375.46	690/690	10.808	20.470	US.EPA Method 10

  
(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. 2-239-0-0006

  
(Miss Preeda Somjai)

Technical Management Team

REG.NO. 2-239-0-0006

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

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

3. \* At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.

5. <sup>2/</sup> The assigned value is specified in EIA report.

MTR GasTurbine 1 (NOx+CO)Sum1/17/09/25

## The Monitoring Result of Emission Concentration GAS Turbine 1 PTT Global Chemical Public Company Limited August 14, 2025

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	13.93	13.93	12.20	12.16	24.25
2	14.00	14.02	12.64	12.60	25.46
3	13.94	13.97	12.85	12.80	25.67
Average	13.96	13.97	12.56	12.52	25.12

Run Number	Oxygen content (%)		Carbonmonoxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	13.93	13.93	187.88	188.00	374.92
2	14.00	14.02	187.37	187.51	378.84
3	13.94	13.97	185.63	185.79	372.65
Average	13.96	13.97	186.96	187.10	375.46

# PTT Global Chemical Public Company Limited

## EMISSION TEST RESULT

**Date:** August 14, 2025  
**Start time:** 2:40 PM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**CO instrument Model:** THERMO 48 C  
**Fuel Type :** Natural Gas

**Run # : 1**  
**Location :** GAS Turbine 1  
**Finish time :** 3:00 PM  
**Serial No.:** 161212-14  
**Serial No.:** 433  
**Serial No.:** 0412106049  
**Test Operator :** Pisanu S.

Time, min	O <sub>2</sub> (%)	NOx (ppm)	CO (ppm)
2:40 PM	14.10	12.10	182.67
2:41 PM	13.99	13.70	191.49
2:42 PM	13.93	14.67	188.41
2:43 PM	13.89	14.21	175.93
2:44 PM	13.97	14.31	185.00
2:45 PM	13.92	14.12	203.06
2:46 PM	13.92	11.01	181.08
2:47 PM	13.90	10.96	181.50
2:48 PM	13.91	10.77	191.57
2:49 PM	13.93	10.89	189.40
2:50 PM	13.93	11.26	181.41
2:51 PM	13.89	11.41	196.06
2:52 PM	13.91	11.69	186.82
2:53 PM	13.94	11.69	215.62
2:54 PM	13.92	11.70	190.48
2:55 PM	13.93	11.96	184.41
2:56 PM	13.92	12.12	187.99
2:57 PM	13.92	12.04	181.16
2:58 PM	13.93	11.90	187.41
2:59 PM	13.93	11.84	179.75
3:00 PM	13.94	11.83	184.33
Average	13.93	12.20	187.88

Signature



( Miss Katesarin Vorradetwittaya )

Environmental Scientist

# PTT Global Chemical Public Company Limited

## EMISSION TEST RESULT

**Date:** August 14, 2025  
**Start time:** 3:01 PM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**CO instrument Model:** THERMO 48 C  
**Fuel Type :** Natural Gas

**Run # : 2**  
**Location :** GAS Turbine 1  
**Finish time :** 3:21 PM  
**Serial No.:** 161212-14  
**Serial No.:** 433  
**Serial No.:** 0412106049  
**Test Operator :** Pisanu S.

Time, min	O <sub>2</sub> (%)	NOx (ppm)	CO (ppm)
3:01 PM	13.95	11.97	193.65
3:02 PM	13.95	11.90	199.39
3:03 PM	13.93	13.24	183.00
3:04 PM	13.94	14.12	195.82
3:05 PM	13.92	12.47	179.80
3:06 PM	13.93	12.30	182.30
3:07 PM	13.95	12.30	189.13
3:08 PM	14.87	12.39	186.54
3:09 PM	14.20	12.37	181.21
3:10 PM	14.01	12.23	185.79
3:11 PM	14.00	12.21	189.96
3:12 PM	13.96	12.39	183.47
3:13 PM	13.95	12.50	181.89
3:14 PM	13.95	12.53	187.89
3:15 PM	13.94	12.67	189.47
3:16 PM	13.94	12.75	191.63
3:17 PM	13.95	12.96	181.30
3:18 PM	13.94	13.04	183.72
3:19 PM	13.93	13.06	194.89
3:20 PM	13.92	13.19	192.94
3:21 PM	13.90	12.80	181.00
Average	14.00	12.64	187.37

Signature



( Miss Katesarin Vorradetwittaya )

Environmental Scientist

# PTT Global Chemical Public Company Limited

## EMISSION TEST RESULT

Run # : 3

Date: August 14, 2025 Location : GAS Turbine 1

Start time: 3:22 PM Finish time: 3:42 PM

O<sub>2</sub> instrument Model: AMI 70 Serial No.: 161212-14

NO<sub>x</sub> instrument Model: TELEDYNE 200 EM Serial No.: 433

CO instrument Model: THERMO 48 C Serial No.: 0412106049

Fuel Type : Natural Gas Test Operator : Pisanu S.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	CO (ppm)
3:22 PM	13.90	12.78	187.21
3:23 PM	13.89	12.73	189.33
3:24 PM	13.90	13.38	181.25
3:25 PM	13.92	14.75	180.94
3:26 PM	13.90	12.92	186.86
3:27 PM	13.88	12.72	189.10
3:28 PM	13.90	12.69	184.44
3:29 PM	13.92	12.52	177.36
3:30 PM	13.92	12.48	170.28
3:31 PM	13.92	12.61	182.99
3:32 PM	13.93	12.66	191.81
3:33 PM	13.94	12.75	188.73
3:34 PM	13.95	13.08	176.25
3:35 PM	13.97	13.00	185.32
3:36 PM	13.98	12.85	203.38
3:37 PM	13.98	12.77	181.40
3:38 PM	13.95	12.62	181.82
3:39 PM	13.99	12.49	191.89
3:40 PM	14.00	12.37	189.72
3:41 PM	14.00	12.25	181.73
3:42 PM	13.99	13.45	196.38
Average	13.94	12.85	185.63

Signature



( Miss Katesarin Vorradetwittaya )

Environmental Scientist



บริษัท ซีคอต จำกัด

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

### STACK EMISSION ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REFERENCE NO. : 225010-CEMS-2508-0003

Branch 6 (Refinery)

SAMPLING BY : SECOT Co., Ltd. REGISTRATION NO. : 7-239

SAMPLING DATE : 15/08/2025 SAMPLING TIME : 02.30-03.32 p.m.

RECEIVED DATE : 25/08/2025 ANALYTICAL DATE : 28/08/2025-11/09/2025

REPORT DATE : 12/09/2025 OPERATOR : Mr. Pisanu Seenampeng (7-239-0029)

STACK LOCATION : Gas Turbine 2 FUEL TYPE : Natural Gas

SOURCE DESCRIPTION : Combustion SAMPLE CONDITION : Normal

STACK DESCRIPTION

Height : 60.0 m Flow Rate\* : 2,931 Ncu.m/min

Diameter : 2.5 m Excess Oxygen : 13.6 %

Temperature : 201.5 °C Moisture Content : 10.0 %

Gas Velocity : 17.8 m/s

PARAMETER	RESULT*		STANDARD <sup>1/</sup> / EIA <sup>2/</sup>	EMISSION RATE		REFERENCE METHOD
	ppm		ppm	g/s		
	13.6%O <sub>2</sub>	7%O <sub>2</sub>	7%O <sub>2</sub>	RESULT	EIA <sup>2/</sup>	
Oxide of Nitrogen (NOx)	9.79	18.58	200/180	0.899	6.000	US.EPA Method 7E
Carbon Monoxide (CO)	173.95	330.32	690/690	9.676	20.470	US.EPA Method 10



(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. 7-239-0-0006

Preeda S.

(Miss Preeda Somjai)

Technical Management Team

REG.NO. 7-239-0-0006

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

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

3. \* At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.5. <sup>2/</sup> The assigned value is specified in EIA report.

**The Monitoring Result of Emission Concentration  
GAS Turbine 2  
PTT Global Chemical Public Company Limited  
August 15, 2025**

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	13.80	13.63	10.55	10.53	20.13
2	13.81	13.60	9.44	9.41	17.92
3	13.75	13.51	9.45	9.42	17.72
<b>Average</b>	<b>13.79</b>	<b>13.58</b>	<b>9.81</b>	<b>9.79</b>	<b>18.58</b>

Run Number	Oxygen content (%)		Carbonmonoxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	13.80	13.63	174.10	174.23	333.12
2	13.81	13.60	174.02	174.16	331.62
3	13.75	13.51	173.32	173.47	326.28
<b>Average</b>	<b>13.79</b>	<b>13.58</b>	<b>173.81</b>	<b>173.95</b>	<b>330.32</b>

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

**Date:** August 15, 2025  
**Start time:** 2:30 PM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**CO instrument Model:** THERMO 48 C  
**Fuel Type :** Natural Gas

**Run # :** 1  
**Location :** GAS Turbine 2  
**Finish time :** 2:50 PM  
**Serial No.:** 161212-14  
**Serial No.:** 433  
**Serial No.:** 0412106049  
**Test Operator :** Pisanu S.

Time, min	O <sub>2</sub> (%)	NOx (ppm)	CO (ppm)
2:30 PM	13.81	11.98	173.30
2:31 PM	13.86	11.83	173.40
2:32 PM	13.84	11.62	173.42
2:33 PM	13.82	11.41	173.45
2:34 PM	13.81	11.15	173.45
2:35 PM	13.81	10.96	173.44
2:36 PM	13.81	10.86	173.61
2:37 PM	13.81	10.74	173.87
2:38 PM	13.81	10.69	174.21
2:39 PM	13.81	10.58	174.45
2:40 PM	13.81	10.44	174.40
2:41 PM	13.79	10.34	174.36
2:42 PM	13.77	10.23	174.43
2:43 PM	13.78	10.09	174.57
2:44 PM	13.73	9.95	174.51
2:45 PM	13.76	9.88	174.40
2:46 PM	13.78	9.87	174.41
2:47 PM	13.79	9.74	174.52
2:48 PM	13.81	9.73	174.60
2:49 PM	13.81	9.73	174.65
2:50 PM	13.81	9.68	174.67
<b>Average</b>	<b>13.80</b>	<b>10.55</b>	<b>174.10</b>

Signature



( Miss Katesarin Vorradetwittaya )

Environmental Scientist

## PTT Global Chemical Public Company Limited EMISSION TEST RESULT

**Date:** August 15, 2025  
**Start time:** 2:51 PM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**CO instrument Model:** THERMO 48 C  
**Fuel Type :** Natural Gas

**Run # :** 2  
**Location :** GAS Turbine 2  
**Finish time :** 3:11 PM  
**Serial No.:** 161212-14  
**Serial No.:** 433  
**Serial No.:** 0412106049  
**Test Operator :** Pisanu S.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	CO (ppm)
2:51 PM	13.81	9.67	174.64
2:52 PM	13.81	9.64	174.61
2:53 PM	13.81	9.60	174.43
2:54 PM	13.81	9.56	174.29
2:55 PM	13.81	9.56	174.26
2:56 PM	13.81	9.56	174.06
2:57 PM	13.79	9.50	173.80
2:58 PM	13.81	9.47	173.70
2:59 PM	13.81	9.41	173.65
3:00 PM	13.81	9.42	173.63
3:01 PM	13.81	9.45	173.73
3:02 PM	13.81	9.45	173.84
3:03 PM	13.81	9.52	173.97
3:04 PM	13.81	9.46	174.05
3:05 PM	13.81	9.49	174.07
3:06 PM	13.80	9.50	174.19
3:07 PM	13.79	9.44	174.16
3:08 PM	13.81	9.28	173.90
3:09 PM	13.81	9.16	173.79
3:10 PM	13.81	9.11	173.84
3:11 PM	13.81	9.07	173.83
<b>Average</b>	13.81	9.44	174.02

Signature



( Miss Katesarin Vorradetwittaya )

Environmental Scientist

## PTT Global Chemical Public Company Limited EMISSION TEST RESULT

**Date:** August 15, 2025  
**Start time:** 3:12 PM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**CO instrument Model:** THERMO 48 C  
**Fuel Type :** Natural Gas

**Run # :** 3  
**Location :** GAS Turbine 2  
**Finish time :** 3:32 PM  
**Serial No.:** 161212-14  
**Serial No.:** 433  
**Serial No.:** 0412106049  
**Test Operator :** Pisanu S.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	CO (ppm)
3:12 PM	13.81	9.13	173.79
3:13 PM	13.81	9.15	173.76
3:14 PM	13.81	9.15	173.84
3:15 PM	13.81	9.08	173.90
3:16 PM	13.81	9.05	173.78
3:17 PM	13.81	9.11	173.79
3:18 PM	13.81	9.17	173.84
3:19 PM	13.81	9.14	173.81
3:20 PM	13.81	9.18	173.93
3:21 PM	13.81	9.27	174.04
3:22 PM	13.91	9.78	172.89
3:23 PM	13.91	9.75	172.91
3:24 PM	13.91	9.71	172.82
3:25 PM	13.63	9.82	172.92
3:26 PM	13.67	9.76	172.82
3:27 PM	13.78	9.76	172.90
3:28 PM	13.57	9.71	172.81
3:29 PM	13.57	9.56	172.67
3:30 PM	13.56	9.79	172.93
3:31 PM	13.57	9.72	172.83
3:32 PM	13.59	9.71	172.80
<b>Average</b>	13.75	9.45	173.32

Signature



( Miss Katesarin Vorradetwittaya )

Environmental Scientist



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิมลทองประไพ 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

MTR GasTurbine 3 (NOx+CO)/Sum/1/17/09/25

## The Monitoring Result of Emission Concentration

### GAS Turbine 3

PTT Global Chemical Public Company Limited

August 18, 2025

#### STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 225010-CEMS-2508-0003
	Branch 6 (Refinery)		
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 7-239
SAMPLING DATE	: 18/08/2025	SAMPLING TIME	: 10.00-11.22 a.m.
RECEIVED DATE	: 25/08/2025	ANALYTICAL DATE	: 28/08/2025-11/09/2025
REPORT DATE	: 12/09/2025	OPERATOR	: Mr. Song Henghchwankul (7-239-0-0016)
STACK LOCATION	: Gas Turbine 3	FUEL TYPE	: Natural Gas
SOURCE DESCRIPTION	: Combustion	SAMPLE CONDITION	: Normal
STACK DESCRIPTION			
Height	: 60.0 m	Flow Rate <sup>1/</sup>	: 2,684 Ncu.m/min
Diameter	: 2.5 m	Excess Oxygen	: 13.0 %
Temperature	: 203.4 °C	Moisture Content	: 10.4 %
Gas Velocity	: 16.3 m/s		

PARAMETER	RESULT*		STANDARD <sup>1/</sup> / EIA <sup>2/</sup>	EMISSION RATE		REFERENCE  METHOD
	ppm		ppm	g/s		
	13.0%O <sub>2</sub>	7%O <sub>2</sub>	7%O <sub>2</sub>	RESULT	EIA <sup>2/</sup>	
Oxide of Nitrogen (NOx)	12.19	21.55	200/180	1.026	6.000	US.EPA Method 7E
Carbon Monoxide (CO)	211.50	374.03	690/690	10.834	20.470	US.EPA Method 10

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. 7-239-0-0006

(Miss Preeda Somjai)

Technical Management Team

REG.NO. 7-239-0-0006

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

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

3. \* At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.

5. <sup>2/</sup> The assigned value is specified in EIA report.

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	13.07	13.00	12.37	12.35	21.73
2	13.12	13.07	12.17	12.15	21.57
3	13.07	13.05	12.09	12.06	21.35
Average	13.09	13.04	12.21	12.19	21.55

Run Number	Oxygen content (%)		Carbonmonoxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	13.07	13.00	214.50	214.69	377.75
2	13.12	13.07	210.93	211.15	374.84
3	13.07	13.05	208.41	208.67	369.49
Average	13.09	13.04	211.28	211.50	374.03

## PTT Global Chemical Public Company Limited EMISSION TEST RESULT

**Date:** August 18, 2025  
**Start time:** 10:20 AM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**CO instrument Model:** API 300 A  
**Fuel Type :** Natural Gas

**Run # : 1**  
**Location :** GAS Turbine 3  
**Finish time :** 10:40 AM  
**Serial No.:** 071023-47  
**Serial No.:** 435  
**Serial No.:** 1070  
**Test Operator :** Song H.

Time, min	O <sub>2</sub> (%)	NOx (ppm)	CO (ppm)
10:20 AM	12.87	12.55	212.91
10:21 AM	12.94	12.53	209.27
10:22 AM	12.91	12.51	212.06
10:23 AM	12.89	12.49	210.79
10:24 AM	12.93	12.48	207.40
10:25 AM	12.90	12.46	211.38
10:26 AM	12.96	12.44	227.37
10:27 AM	13.01	12.41	238.29
10:28 AM	13.04	12.41	233.21
10:29 AM	13.13	12.37	231.73
10:30 AM	13.22	12.34	230.91
10:31 AM	13.29	12.34	218.00
10:32 AM	13.28	12.35	206.87
10:33 AM	13.22	12.34	208.17
10:34 AM	13.20	12.30	198.89
10:35 AM	13.18	12.27	200.89
10:36 AM	13.13	12.27	209.95
10:37 AM	13.07	12.27	210.76
10:38 AM	13.00	12.27	210.27
10:39 AM	12.94	12.25	207.17
10:40 AM	13.31	12.22	208.22
<b>Average</b>	13.07	12.37	214.50

Signature



( Miss Katesarin Vorradetwittaya )

Environmental Scientist

## PTT Global Chemical Public Company Limited EMISSION TEST RESULT

**Date:** August 18, 2025  
**Start time:** 10:41 AM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**CO instrument Model:** API 300 A  
**Fuel Type :** Natural Gas

**Run # : 2**  
**Location :** GAS Turbine 3  
**Finish time :** 11:01 AM  
**Serial No.:** 071023-47  
**Serial No.:** 435  
**Serial No.:** 1070  
**Test Operator :** Song H.

Time, min	O <sub>2</sub> (%)	NOx (ppm)	CO (ppm)
10:41 AM	13.26	12.22	202.40
10:42 AM	13.26	12.22	204.36
10:43 AM	13.23	12.22	204.97
10:44 AM	13.19	12.22	213.81
10:45 AM	13.16	12.22	217.50
10:46 AM	13.12	12.22	219.07
10:47 AM	13.12	12.21	217.41
10:48 AM	13.10	12.19	222.83
10:49 AM	13.09	12.18	221.60
10:50 AM	13.08	12.15	216.66
10:51 AM	13.04	12.17	202.88
10:52 AM	13.06	12.17	206.37
10:53 AM	13.05	12.17	199.11
10:54 AM	13.03	12.18	194.05
10:55 AM	13.05	12.15	196.16
10:56 AM	13.05	12.11	217.42
10:57 AM	13.01	12.09	215.84
10:58 AM	13.14	12.10	210.73
10:59 AM	13.14	12.10	211.50
11:00 AM	13.12	12.11	216.21
11:01 AM	13.13	12.12	218.70
<b>Average</b>	13.12	12.17	210.93

Signature



( Miss Katesarin Vorradetwittaya )

Environmental Scientist

# PTT Global Chemical Public Company Limited

## EMISSION TEST RESULT

**Date:** August 18, 2025  
**Start time:** 11:02 AM  
**O<sub>2</sub> instrument Model:** AMI 70  
**NO<sub>x</sub> instrument Model:** TELEDYNE 200 EM  
**CO instrument Model:** API 300 A  
**Fuel Type:** Natural Gas

**Run #:** 3  
**Location:** GAS Turbine 3  
**Finish time:** 11:22 AM  
**Serial No.:** 071023-47  
**Serial No.:** 435  
**Serial No.:** 1070  
**Test Operator:** Song H.

Time, min	O <sub>2</sub> (%)	NO <sub>x</sub> (ppm)	CO (ppm)
11:02 AM	13.11	12.10	214.18
11:03 AM	13.11	12.10	200.12
11:04 AM	13.07	12.09	205.99
11:05 AM	13.09	12.09	207.87
11:06 AM	13.09	12.09	210.01
11:07 AM	13.06	12.07	214.15
11:08 AM	13.04	12.08	211.81
11:09 AM	13.06	12.09	210.07
11:10 AM	13.13	12.06	205.94
11:11 AM	13.11	12.07	204.89
11:12 AM	13.08	12.11	214.81
11:13 AM	13.06	12.09	217.61
11:14 AM	13.09	12.09	205.03
11:15 AM	13.09	12.11	202.02
11:16 AM	13.08	12.12	205.42
11:17 AM	13.05	12.10	205.12
11:18 AM	13.03	12.09	207.66
11:19 AM	13.05	12.09	213.11
11:20 AM	13.01	12.09	206.05
11:21 AM	13.01	12.11	206.93
11:22 AM	13.15	12.10	207.86
Average	13.07	12.09	208.41

Signature

( Miss Katesarin Vorradetwittaya )

Environmental Scientist



บริษัท ซีคอต จำกัด

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

### STACK EMISSION ANALYSIS REPORT

**CLIENT NAME** : PTT Global Chemical Public Co., Ltd. **REFERENCE NO.** : 225010-Stack-2508-0003  
 Branch 6 (Refinery)  
**SAMPLING BY** : SECOT Co., Ltd. **REGISTRATION NO.** : -  
**SAMPLING DATE** : 14/08/2025 **SAMPLING TIME** : 02.50-03.52 p.m.  
**RECEIVED DATE** : 19/08/2025 **ANALYTICAL DATE** : 26/08/2025  
**REPORT DATE** : 01/09/2025 **OPERATOR** : Mr. Song Hengchwanukul  
**STACK LOCATION** : Inlet Sulfur Scrubber **FUEL TYPE** : -  
**SOURCE DESCRIPTION** : Process **SAMPLE CONDITION** : Normal

#### STACK DESCRIPTION

**Height** : 5.0 m **Flow rate<sup>1/</sup>** : 100.4 Ncu.m/min  
**Diameter** : 0.5 m **Excess Oxygen** : 20.5 %  
**Temperature** : 32.0 °C **Moisture Content** : 4.9 %  
**Gas Velocity** : 9.2 m/s

PARAMETER	UNIT	ND	RESULTS	ASSIGN	STANDARD <sup>3/</sup>	REFERENCE
		Non-detectable	Inlet	VALUE <sup>2/</sup>		METHODS
Hydrogen Sulfide	ppm	<0.30	ND	-	-	US. EPA Method 16
(H <sub>2</sub> S)	g/s	-	<0.0007	-	-	

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Naris Pawanapetch

(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. <sup>1/</sup> At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>2/</sup> The assign value in EIA report.

5. <sup>3/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนเริ่มคลองประปา 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

#### STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 225010-CEMs-2508-0003
	Branch 6 (Refinery)		
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 2-239
SAMPLING DATE	: 14/08/2025	SAMPLING TIME	: 02.50-03.52 p.m.
RECEIVED DATE	: 25/08/2025	ANALYTICAL DATE	: 28/08/2025-11/09/2025
REPORT DATE	: 12/09/2025	OPERATOR	: Mr. Song Hengchhankul (2-239-0-0016)
STACK LOCATION	: Inlet Sulfur Scrubber	FUEL TYPE	: -
SOURCE DESCRIPTION	: Process	SAMPLE CONDITION	: Normal

#### STACK DESCRIPTION

Height	: 5.0	m	Flow Rate*	: 100.4	Ncu.m/min
Diameter	: 0.50	m	Excess Oxygen	: 20.5	%
Temperature	: 32.0	°C	Moisture Content	: 4.9	%
Gas Velocity	: 9.2	m/s			

PARAMETER	RESULT*	STANDARD <sup>1/</sup>	EMISSION RATE		REFERENCE METHOD
	ppm	EIA <sup>2/</sup>	g/s		
	Inlet Sulfur Scrubber	ppm	RESULT	EIA <sup>2/</sup>	
Sulfur Dioxide (SO <sub>2</sub> )	0.41	-	0.002	-	US.EPA Method 6C

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. 2-239-0-0006

(Miss Preeda Somjai)

Technical Management Team

REG.NO. 2-239-0-0006

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

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

3. \* At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.

5. <sup>2/</sup> The assigned value is specified in EIA report.

### The Monitoring Result of Emission Concentration Sulfur scrubber (Inlet) PTT Global Chemical Public Company Limited August 14, 2025

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)	
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2
1	20.64	20.49	0.54	0.51
2	20.59	20.45	0.47	0.44
3	20.59	20.47	0.33	0.29
Average	20.61	20.47	0.45	0.41

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

**Date:** August 14, 2025  
**Start time:** 2:50 PM  
**O<sub>2</sub> instrument Model:** AMI 70  
**SO<sub>2</sub> instrument Model:** API 100 AH  
**Fuel Type :** -

**Run # : 1**  
**Location :** Sulfur scrubber (Inlet)  
**Finish time :** 3:10 PM  
**Serial No.:** 071023-47  
**Serial No.:** 060  
**Test Operator :** Kittipong T.

Time, min	O <sub>2</sub> (%)	SO <sub>2</sub> (ppm)
2:50 PM	20.55	0.54
2:51 PM	20.56	0.54
2:52 PM	20.59	0.46
2:53 PM	20.51	0.51
2:54 PM	20.53	0.54
2:55 PM	20.66	0.37
2:56 PM	20.60	0.56
2:57 PM	20.62	0.53
2:58 PM	20.69	0.50
2:59 PM	20.64	0.53
3:00 PM	20.65	0.62
3:01 PM	20.71	0.61
3:02 PM	20.67	0.59
3:03 PM	20.66	0.61
3:04 PM	20.71	0.54
3:05 PM	20.68	0.51
3:06 PM	20.65	0.54
3:07 PM	20.70	0.59
3:08 PM	20.69	0.54
3:09 PM	20.65	0.54
3:10 PM	20.68	0.56
Average	20.64	0.54

Signature

( Miss Katesarin Vorradetwittaya )

Environmental Scientist

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

**Date:** August 14, 2025  
**Start time:** 3:11 PM  
**O<sub>2</sub> instrument Model:** AMI 70  
**SO<sub>2</sub> instrument Model:** API 100 AH  
**Fuel Type :** -

**Run # : 2**  
**Location :** Sulfur scrubber (Inlet)  
**Finish time :** 3:31 PM  
**Serial No.:** 071023-47  
**Serial No.:** 060  
**Test Operator :** Kittipong T.

Time, min	O <sub>2</sub> (%)	SO <sub>2</sub> (ppm)
3:11 PM	20.69	0.66
3:12 PM	20.65	0.62
3:13 PM	20.69	0.58
3:14 PM	20.59	0.59
3:15 PM	20.55	0.55
3:16 PM	20.57	0.53
3:17 PM	20.61	0.51
3:18 PM	20.54	0.49
3:19 PM	20.58	0.48
3:20 PM	20.62	0.47
3:21 PM	20.56	0.49
3:22 PM	20.58	0.44
3:23 PM	20.64	0.44
3:24 PM	20.55	0.45
3:25 PM	20.57	0.42
3:26 PM	20.64	0.42
3:27 PM	20.56	0.39
3:28 PM	20.56	0.41
3:29 PM	20.63	0.35
3:30 PM	20.55	0.32
3:31 PM	20.55	0.36
Average	20.59	0.47

Signature

( Miss Katesarin Vorradetwittaya )

Environmental Scientist

# PTT Global Chemical Public Company Limited

## EMISSION TEST RESULT

Date: August 14, 2025

Start time: 3:32 PM

O<sub>2</sub> instrument Model: AMI 70SO<sub>2</sub> instrument Model: API 100 AH

Fuel Type : -

Run # : 3

Location : Sulfur scrubber (Inlet)

Finish time : 3:52 PM

Serial No.: 071023-47<sup>1</sup>

Serial No.: 060

Test Operator : Kittipong T.

Time, min	O <sub>2</sub> (%)	SO <sub>2</sub> (ppm)
3:32 PM	20.61	0.36
3:33 PM	20.65	0.32
3:34 PM	20.57	0.38
3:35 PM	20.57	0.40
3:36 PM	20.64	0.33
3:37 PM	20.57	0.34
3:38 PM	20.57	0.32
3:39 PM	20.63	0.39
3:40 PM	20.59	0.33
3:41 PM	20.57	0.31
3:42 PM	20.62	0.32
3:43 PM	20.60	0.32
3:44 PM	20.58	0.33
3:45 PM	20.59	0.32
3:46 PM	20.56	0.31
3:47 PM	20.60	0.36
3:48 PM	20.60	0.31
3:49 PM	20.57	0.32
3:50 PM	20.60	0.32
3:51 PM	20.61	0.30
3:52 PM	20.57	0.32
Average	20.59	0.33

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

บริษัท ซีคอต จำกัด  
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

### STACK EMISSION ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REFERENCE NO. : 225010-Stack-2508-0003  
Branch 6 (Refinery)

SAMPLING BY : SECOT Co., Ltd. REGISTRATION NO. : -

SAMPLING DATE : 14/08/2025 SAMPLING TIME : 02.50-03.52 p.m.

RECEIVED DATE : 19/08/2025 ANALYTICAL DATE : 26/08/2025

REPORT DATE : 01/09/2025 OPERATOR : Mr. Song Hengchhankul (ว-239-ท-0016)

STACK LOCATION : Outlet Sulfur Scrubber FUEL TYPE : \*

SOURCE DESCRIPTION : Process SAMPLE CONDITION : Normal

#### STACK DESCRIPTION

Height : 5.0 m Flow rate<sup>1/</sup> : 23.5 Ncu.m/min

Diameter : 0.5 m Excess Oxygen : 20.4 %

Temperature : 39.0 °C Moisture Content : 5.3 %

Gas Velocity : 2.2 m/s

PARAMETER	UNIT	ND	RESULTS	ASSIGN	STANDARD <sup>3/</sup>	REFERENCE METHODS
		Non-detectable	Outlet	VALUE <sup>2/</sup>		
Hydrogen Sulfide	ppm	<0.30	ND	-	60	US. EPA Method 16
(H <sub>2</sub> S)	g/s	-	<0.0002	-	-	

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Naris Poowasanetch

(Miss Narisa Poowasanetch)

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. <sup>1/</sup> At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.4. <sup>2/</sup> The assign value in EIA report.5. <sup>3/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.



บริษัท ซีคอต จำกัด  
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

STACK EMISSION ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Co., Ltd. REFERENCE NO. : 225010-CEMs-2508-0003  
Branch 6 (Refinery)  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION NO. : 2-239  
SAMPLING DATE : 14/08/2025 SAMPLING TIME : 02.50-03.52 p.m.  
RECEIVED DATE : 25/08/2025 ANALYTICAL DATE : 28/08/2025-11/09/2025  
REPORT DATE : 12/09/2025 OPERATOR : Mr. Song Hengchwankul (2-239-ท-0016)  
STACK LOCATION : Outlet Sulfur Scrubber FUEL TYPE : -  
SOURCE DESCRIPTION : Process SAMPLE CONDITION : Normal

STACK DESCRIPTION

Height : 5.0 m Flow Rate <sup>1/</sup> : 23.5 Ncu.m/min  
Diameter : 0.50 m Excess Oxygen : 20.4 %  
Temperature : 39.0 °C Moisture Content : 5.3 %  
Gas Velocity : 2.2 m/s

PARAMETER	RESULT*	STANDARD <sup>1/</sup> /	EMISSION RATE		REFERENCE METHOD
	ppm	EIA <sup>2/</sup>	g/s		
	Outlet Sulfur Scrubber	ppm	RESULT	EIA <sup>2/</sup>	
Sulfur Dioxide (SO <sub>2</sub> )	0.36	500/-	0.0004	-	US.EPA Method 6C

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. 2-239-ท-0006

(Miss Preeda Somjai)

Technical Management Team

REG.NO. 2-239-ท-0006

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

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

3. \* At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. <sup>1/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2554.

5. <sup>2/</sup> The assigned value is specified in EIA report.

The Monitoring Result of Emission Concentration  
Sulfur scrubber (Outlet)  
PTT Global Chemical Public Company Limited  
August 14, 2025

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)	
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2
1	20.55	20.39	0.43	0.39
2	20.55	20.42	0.34	0.30
3	20.49	20.39	0.44	0.39
Average	20.53	20.40	0.40	0.36

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

**Date:** August 14, 2025  
**Start time:** 2:50 PM  
**O<sub>2</sub> instrument Model:** AMI 70  
**SO<sub>2</sub> instrument Model:** TELEDYNE 100 EH  
**Fuel Type:** -

**Run # : 1**  
**Location :** Sulfur scrubber (Outlet)  
**Finish time :** 3:10 PM  
**Serial No.:** 071023-47  
**Serial No.:** 186  
**Test Operator :** Song H.

Time, min	O <sub>2</sub> (%)	SO <sub>2</sub> (ppm)
2:50 PM	20.49	0.36
2:51 PM	20.49	0.49
2:52 PM	20.48	0.53
2:53 PM	20.47	0.53
2:54 PM	20.46	0.47
2:55 PM	20.45	0.52
2:56 PM	20.46	0.49
2:57 PM	20.47	0.52
2:58 PM	20.48	0.45
2:59 PM	20.51	0.34
3:00 PM	20.54	0.53
3:01 PM	20.57	0.40
3:02 PM	20.59	0.43
3:03 PM	20.62	0.45
3:04 PM	20.65	0.45
3:05 PM	20.65	0.45
3:06 PM	20.65	0.44
3:07 PM	20.65	0.36
3:08 PM	20.63	0.32
3:09 PM	20.61	0.23
3:10 PM	20.60	0.22
<b>Average</b>	20.55	0.43

Signature



( Miss Katesarin Vorradetwittaya )

Environmental Scientist

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

**Date:** August 14, 2025  
**Start time:** 3:11 PM  
**O<sub>2</sub> instrument Model:** AMI 70  
**SO<sub>2</sub> instrument Model:** TELEDYNE 100 EH  
**Fuel Type:** -

**Run # : 2**  
**Location :** Sulfur scrubber (Outlet)  
**Finish time :** 3:31 PM  
**Serial No.:** 071023-47  
**Serial No.:** 186  
**Test Operator :** Song H.

Time, min	O <sub>2</sub> (%)	SO <sub>2</sub> (ppm)
3:11 PM	20.58	0.23
3:12 PM	20.57	0.27
3:13 PM	20.57	0.31
3:14 PM	20.57	0.31
3:15 PM	20.57	0.33
3:16 PM	20.55	0.30
3:17 PM	20.55	0.28
3:18 PM	20.54	0.28
3:19 PM	20.54	0.34
3:20 PM	20.53	0.42
3:21 PM	20.53	0.56
3:22 PM	20.53	0.38
3:23 PM	20.53	0.42
3:24 PM	20.55	0.43
3:25 PM	20.57	0.39
3:26 PM	20.56	0.35
3:27 PM	20.52	0.35
3:28 PM	20.52	0.17
3:29 PM	20.52	0.21
3:30 PM	20.53	0.35
3:31 PM	20.52	0.46
<b>Average</b>	20.55	0.34

Signature



( Miss Katesarin Vorradetwittaya )

Environmental Scientist

# PTT Global Chemical Public Company Limited

## EMISSION TEST RESULT

**Date:** August 14, 2025  
**Start time:** 3:32 PM  
**O<sub>2</sub> instrument Model:** AMI 70  
**SO<sub>2</sub> instrument Model:** TELEDYNE 100 EH  
**Fuel Type:** -

**Run #:** 3  
**Location:** Sulfur scrubber (Outlet)  
**Finish time:** 3:52 PM  
**Serial No.:** 071023-47  
**Serial No.:** 186  
**Test Operator:** Song H.

Time, min	O <sub>2</sub> (%)	SO <sub>2</sub> (ppm)
3:32 PM	20.52	0.51
3:33 PM	20.51	0.56
3:34 PM	20.51	0.53
3:35 PM	20.51	0.51
3:36 PM	20.51	0.52
3:37 PM	20.49	0.45
3:38 PM	20.49	0.49
3:39 PM	20.48	0.48
3:40 PM	20.49	0.45
3:41 PM	20.48	0.40
3:42 PM	20.50	0.34
3:43 PM	20.50	0.38
3:44 PM	20.50	0.37
3:45 PM	20.49	0.40
3:46 PM	20.50	0.43
3:47 PM	20.48	0.39
3:48 PM	20.49	0.39
3:49 PM	20.48	0.39
3:50 PM	20.46	0.39
3:51 PM	20.46	0.45
3:52 PM	20.46	0.51
<b>Average</b>	20.49	0.44

Signature

( Miss Katesarin Vorradetwittaya )

Environmental Scientist



บริษัท ซีคอต จำกัด

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 : cnvserv@secot.co.th

### STACK EMISSION ANALYSIS REPORT

**CLIENT NAME** : PTT Global Chemical Public Co., Ltd.  
**REFERENCE NO.** : 225010-Stack-2508-0003  
**Branch 6 (Refinery)**

**SAMPLING BY** : SECOT Co., Ltd.  
**SAMPLING DATE** : 14/08/2025

**SAMPLING TIME** : 10.30-11.50 a.m.  
**RECEIVED DATE** : 19/08/2025

**ANALYTICAL DATE** : 22/08/2025  
**REPORT DATE** : 01/09/2025

**STACK LOCATION** : VRU Stack of Tank Farm  
**FUEL TYPE** : -

**SOURCE DESCRIPTION** : Process  
**SAMPLE CONDITION** : Normal

**OPERATOR** : Mr. Pisanu Seenampeng

PARAMETER	UNIT	ND Non-detectable	RESULT*			STANDARD	REFERENCE METHOD
			Inlet (V5202)	Outlet (V5204)	Outlet (V5205)		
TVOC as propane	ppm	-	51,392	52.84	6.02	-	US. EPA Method
	mg/l	-	93.00	0.10	0.01	-	25A

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpet

(Miss Narisa Poowasanpet)

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. \* At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.



บริษัท ซีคอต จำกัด  
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

### STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 225010-Stack-2508-0003
	Branch 6 (Refinery)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 14/08/2025
SAMPLING TIME	: 10.30-11.50 a.m.	RECEIVED DATE	: 19/08/2025
ANALYTICAL DATE	: 25/08/2025	REPORT DATE	: 01/09/2025
STACK LOCATION	: VRU Stack of Tank Farm	FUEL TYPE	: -
SOURCE DESCRIPTION	: Process	SAMPLE CONDITION	: Normal
OPERATOR	: Mr. Pisanu Seenampeng		

PARAMETER	UNIT	ND	RESULT*			STANDARD	REFERENCE METHOD
		Non-detectable	Inlet (V5202)	Outlet (V5204)	Outlet (V5205)		
Benzene	ppm	<0.06	4,674	5.23	ND	-	US. EPA Method 18
	mg/l	<0.0002	14.93	0.020	ND	-	

*Sudaporn S.*  
(Miss Sudaporn Soonthorn)  
Analyst

*Mainu 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. \* At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.



บริษัท ซีคอต จำกัด  
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

### STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 225010-Stack-2508-0003
	Branch 6 (Refinery)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 18/08/2025
SAMPLING TIME	: 02.45-03.45 p.m.	RECEIVED DATE	: 19/08/2025
ANALYTICAL DATE	: 22/08/2025	REPORT DATE	: 01/09/2025
STACK LOCATION	: VRU Stack of Truck Loading	FUEL TYPE	: -
SOURCE DESCRIPTION	: Process	SAMPLE CONDITION	: Normal
OPERATOR	: Mr. Pisanu Seenampeng		

PARAMETER	UNIT	ND	RESULT*		ASSIGN	STANDARD <sup>2/</sup>	REFERENCE
		Non-detectable	Inlet	Outlet	VALUE <sup>1/</sup>		
TVOC as propane	ppm	-	22,133	160	-	-	US. EPA Method
	mg/l	-	39.92	0.29	17	15.0	25A

*Sudaporn S.*  
(Miss Sudaporn Soonthorn)  
Analyst

*Mainu 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. \* At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.  
4. <sup>1/</sup> The assign value in EIA report.  
5. <sup>2/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2553.



บริษัท ซีคอต จำกัด

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

### STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 225010-Stack-2508-0003
	Branch 6 (Refinery)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 18/08/2025
SAMPLING TIME	: 02.45-03.45 p.m.	RECEIVED DATE	: 19/08/2025
ANALYTICAL DATE	: 25/08/2025	REPORT DATE	: 01/09/2025
STACK LOCATION	: VRU Stack of Truck Loading	FUEL TYPE	: -
SOURCE DESCRIPTION	: Process	SAMPLE CONDITION	: Normal
OPERATOR	: Mr. Pisanu Seenampeng		

PARAMETER	UNIT	ND	RESULT*		ASSIGN	STANDARD <sup>2/</sup>	REFERENCE METHOD
		Non-detectable	Inlet	Outlet	VALUE <sup>1/</sup>		
Benzene	ppm	<0.06	80.08	0.34	-	-	US. EPA Method 18
	mg/l	<0.0002	0.26	0.001	-	0.21	

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Mainu Poowasanetch

(Miss Narisa Poowasanetch)

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. \* At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.
  4. <sup>1/</sup> The assign value in EIA report.
  5. <sup>2/</sup> Notification of the Ministry of Natural Resources and Environment B.E.2553.

## ระดับเสียง

---



## Noise Monitoring Result : Community Noise

### MTR-PTTGC6-Refinery

Location : Takuan-Ao Pradu Community-1      Monitor Period : 13-20 Aug 2025  
 SLM Model : Cirrus CR162B      Serial No : G302740  
 Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515      Serial No : 97097  
 Calibration Ref dB(A) : 94.0      Certified Date : 02 Oct 2024  
 SLM Reading / Adjust dB(A) : 93.7/0.0      Expire Date : 01 Oct 2025  
 Cal Sheet No.: CR-515-2025-203

Time	Equivalent Sound Pressure Level (dB(A))						
	13-14 Aug 2025	14-15 Aug 2025	15-16 Aug 2025	16-17 Aug 2025	17-18 Aug 2025	18-19 Aug 2025	19-20 Aug 2025
12:00 - 13:00	55.5	58.1	56.3	60.5	54.3	59.6	56.7
13:00 - 14:00	54.4	57.4	55.4	55.5	55.3	55.0	54.5
14:00 - 15:00	52.0	55.0	53.4	53.4	53.4	53.4	52.8
15:00 - 16:00	53.7	52.9	53.6	51.8	53.1	54.9	54.1
16:00 - 17:00	64.0	57.7	56.1	55.6	54.7	57.1	57.8
17:00 - 18:00	59.4	58.9	59.1	57.6	55.3	59.4	59.1
18:00 - 19:00	56.6	55.5	56.7	58.5	56.3	59.0	55.8
19:00 - 20:00	55.2	55.8	55.7	55.7	55.5	57.5	55.4
20:00 - 21:00	53.4	52.2	54.1	54.3	54.0	54.8	58.8
21:00 - 22:00	50.1	51.3	55.8	51.5	53.0	52.7	49.2
22:00 - 23:00	49.4	50.6	53.5	53.1	51.8	54.7	52.3
23:00 - 00:00	50.0	49.7	51.9	50.5	50.4	50.6	49.4
00:00 - 01:00	48.6	48.6	50.7	50.9	49.2	51.1	50.4
01:00 - 02:00	48.3	48.3	50.4	49.9	49.7	48.9	47.0
02:00 - 03:00	48.0	48.6	50.4	51.7	54.4	49.1	46.3
03:00 - 04:00	46.7	47.2	48.3	48.7	50.5	47.9	46.9
04:00 - 05:00	48.4	48.4	51.4	52.0	49.6	48.8	48.7
05:00 - 06:00	51.9	52.7	51.6	50.4	52.9	52.8	52.8
06:00 - 07:00	56.4	57.5	54.8	54.5	57.0	55.9	55.9
07:00 - 08:00	59.3	59.1	58.2	54.0	59.1	60.5	60.0
08:00 - 09:00	65.9	58.1	55.9	53.5	64.2	60.1	54.1
09:00 - 10:00	54.0	53.9	53.0	53.4	53.9	53.1	54.4
10:00 - 11:00	54.3	56.1	52.7	54.0	54.6	56.6	52.5
11:00 - 12:00	55.3	55.1	54.6	53.6	54.6	56.0	54.3

Leq(24)*	57.1	55.1	54.7	54.5	55.6	56.0	54.8
Ldn	59.6	59.1	59.1	58.9	59.9	59.7	58.7
Lmax **	83.0	84.8	86.0	82.2	86.2	87.0	89.3

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

(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

Preeda S.  
 (Miss Preeda Somjai)  
 Technical Management Team



## Noise Monitoring Result : Background Noise

### MTR-PTTGC6-Refinery

Location : Takuan-Ao Pradu Community-1      Monitor Period : 13-20 Aug 2025  
 SLM Model : Cirrus CR162B      Serial No : G302740  
 Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515      Serial No : 97097  
 Calibration Ref dB(A) : 94.0      Certified Date : 02 Oct 2024  
 SLM Reading / Adjust dB(A) : 93.7/0.0      Expire Date : 01 Oct 2025  
 Cal Sheet No.: CR-515-2025-203

Time	L90 (dB(A))						
	13-14 Aug 2025	14-15 Aug 2025	15-16 Aug 2025	16-17 Aug 2025	17-18 Aug 2025	18-19 Aug 2025	19-20 Aug 2025
12:00 - 13:00	46.7	47.3	45.9	47.3	49.1	47.6	45.7
13:00 - 14:00	46.9	47.2	45.5	47.2	48.2	46.8	45.6
14:00 - 15:00	47.0	47.7	45.7	46.1	47.5	46.8	45.8
15:00 - 16:00	45.4	46.9	44.9	46.1	46.7	45.6	45.6
16:00 - 17:00	47.0	47.2	45.5	46.4	46.9	46.2	46.2
17:00 - 18:00	48.0	47.6	47.8	46.9	46.4	47.7	48.1
18:00 - 19:00	46.3	46.5	47.0	49.2	46.5	46.6	47.2
19:00 - 20:00	46.0	47.2	46.2	48.2	47.3	49.8	46.9
20:00 - 21:00	44.8	46.6	46.7	47.9	44.0	46.7	44.9
21:00 - 22:00	44.5	48.4	47.0	48.4	45.5	46.6	43.0
22:00 - 23:00	46.0	47.3	49.6	48.2	46.8	47.9	43.9
23:00 - 00:00	47.1	47.5	49.9	48.2	47.1	45.3	46.4
00:00 - 01:00	46.6	47.3	49.0	48.3	46.1	46.2	44.5
01:00 - 02:00	46.4	46.9	48.7	46.2	46.6	46.8	45.5
02:00 - 03:00	46.0	46.5	47.6	46.1	47.4	47.8	45.3
03:00 - 04:00	45.2	45.7	46.9	47.5	47.6	44.5	45.1
04:00 - 05:00	45.2	45.0	47.2	46.8	47.0	44.5	45.2
05:00 - 06:00	45.3	45.4	47.5	46.0	46.9	45.5	45.1
06:00 - 07:00	46.3	46.9	48.1	45.2	47.4	46.1	45.5
07:00 - 08:00	49.1	48.7	49.7	43.9	48.1	48.6	46.9
08:00 - 09:00	46.5	46.5	49.2	42.0	47.4	45.6	42.5
09:00 - 10:00	45.8	45.5	47.0	48.1	46.5	44.6	41.8
10:00 - 11:00	45.9	45.6	46.8	46.3	46.3	44.6	41.5
11:00 - 12:00	45.9	45.4	47.0	46.9	46.6	44.8	41.7

L90(avg)*	46.4	46.8	47.6	47.0	47.0	46.6	45.3
-----------	------	------	------	------	------	------	------

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

(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

Preeda S.  
 (Miss Preeda Somjai)  
 Technical Management Team



## Noise Monitoring Result : Community Noise

### MTR-PTTGC6-Refinery

Location : Takuan-Ao Pradu Community-2      Monitor Period : 13-20 Aug 2025  
 SLM Model : Cirrus CR162B      Serial No : G302333  
 Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515      Serial No : 97097  
 Calibration Ref dB(A) : 94.0      Certified Date : 02 Oct 2024  
 SLM Reading / Adjust dB(A) : 93.7/0.0      Expire Date : 01 Oct 2025  
 Cal Sheet No.: CR-515-2025-203

Time	Equivalent Sound Pressure Level (dB(A))						
	13-14 Aug 2025	14-15 Aug 2025	15-16 Aug 2025	16-17 Aug 2025	17-18 Aug 2025	18-19 Aug 2025	19-20 Aug 2025
11:00 - 12:00	60.3	52.9	54.1	50.1	52.8	50.2	59.7
12:00 - 13:00	58.6	59.5	61.5	50.0	51.9	54.9	60.5
13:00 - 14:00	53.7	53.7	53.2	51.0	50.3	53.1	55.5
14:00 - 15:00	58.8	55.5	52.0	50.6	49.9	56.1	53.5
15:00 - 16:00	55.0	60.1	53.4	50.5	49.6	55.0	53.9
16:00 - 17:00	52.9	50.4	50.4	49.6	50.8	54.9	50.9
17:00 - 18:00	52.6	52.3	50.1	50.1	52.4	51.6	50.1
18:00 - 19:00	52.7	51.9	53.4	60.7	53.2	64.2	52.1
19:00 - 20:00	51.2	48.3	48.9	50.8	48.5	64.8	48.4
20:00 - 21:00	51.3	54.3	50.1	50.4	49.0	51.2	48.4
21:00 - 22:00	51.3	48.6	51.0	50.4	49.8	50.0	48.7
22:00 - 23:00	52.8	48.6	53.6	50.1	49.3	51.1	49.0
23:00 - 00:00	51.6	48.7	53.7	50.2	51.6	50.3	48.7
00:00 - 01:00	54.7	48.8	52.7	51.1	49.8	49.1	48.4
01:00 - 02:00	60.5	49.0	51.1	49.3	49.1	49.2	48.7
02:00 - 03:00	54.1	55.6	51.7	55.6	51.3	48.8	48.6
03:00 - 04:00	55.6	48.1	49.2	49.9	48.9	49.4	48.4
04:00 - 05:00	57.9	50.3	51.5	52.3	49.7	52.8	50.8
05:00 - 06:00	57.7	50.2	51.3	51.4	49.7	52.1	50.7
06:00 - 07:00	55.9	52.8	50.6	51.1	50.9	52.3	50.6
07:00 - 08:00	55.5	56.9	50.5	50.4	52.7	57.2	57.5
08:00 - 09:00	53.5	52.7	50.9	50.8	51.2	52.1	51.2
09:00 - 10:00	50.8	53.1	51.4	51.8	52.0	52.9	50.2
10:00 - 11:00	53.0	53.2	50.5	52.1	51.5	52.2	49.7
Leq(24)*	55.7	53.8	53.1	52.4	50.9	56.1	53.3
Ldn	62.7	58.2	58.6	58.2	56.7	59.1	57.1
Lmax **	66.8	68.2	64.3	62.1	77.4	93.7	83.5
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

(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

Preeda S.  
 (Miss Preeda Somjai)  
 Technical Management Team



## Noise Monitoring Result : Background Noise

### MTR-PTTGC6-Refinery

Location : Takuan-Ao Pradu Community-2      Monitor Period : 13-20 Aug 2025  
 SLM Model : Cirrus CR162B      Serial No : G302333  
 Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515      Serial No : 97097  
 Calibration Ref dB(A) : 94.0      Certified Date : 02 Oct 2024  
 SLM Reading / Adjust dB(A) : 93.7/0.0      Expire Date : 01 Oct 2025  
 Cal Sheet No.: CR-515-2025-203

Time	L90 (dB(A))						
	13-14 Aug 2025	14-15 Aug 2025	15-16 Aug 2025	16-17 Aug 2025	17-18 Aug 2025	18-19 Aug 2025	19-20 Aug 2025
11:00 - 12:00	51.5	46.3	48.9	47.8	49.0	48.7	47.3
12:00 - 13:00	52.0	48.6	49.8	48.1	49.3	49.1	50.3
13:00 - 14:00	52.1	47.7	49.2	48.6	48.5	48.8	48.9
14:00 - 15:00	52.7	50.6	49.0	48.4	48.3	48.8	48.7
15:00 - 16:00	51.9	48.6	48.5	47.9	48.0	48.0	47.2
16:00 - 17:00	51.3	48.1	46.8	48.0	48.3	48.1	48.2
17:00 - 18:00	51.2	47.4	48.0	48.1	47.8	47.3	47.9
18:00 - 19:00	51.1	47.3	48.1	50.0	47.5	47.8	47.7
19:00 - 20:00	51.0	47.3	47.6	48.9	47.4	50.7	47.6
20:00 - 21:00	51.2	47.8	48.5	48.9	47.9	49.8	47.7
21:00 - 22:00	51.2	47.8	49.1	49.0	48.0	48.8	47.8
22:00 - 23:00	51.2	47.8	50.2	49.0	48.0	49.5	48.3
23:00 - 00:00	51.0	47.8	50.6	48.6	50.0	49.2	48.0
00:00 - 01:00	50.1	47.7	49.7	48.7	48.5	48.2	47.6
01:00 - 02:00	50.1	47.7	49.2	48.0	48.2	48.5	47.8
02:00 - 03:00	50.3	47.4	49.5	48.5	48.3	48.1	47.6
03:00 - 04:00	54.4	47.0	48.0	48.4	48.1	48.0	47.7
04:00 - 05:00	52.8	47.0	48.1	47.9	47.8	48.0	47.8
05:00 - 06:00	53.4	47.3	48.8	47.7	47.8	48.0	47.8
06:00 - 07:00	53.4	48.0	48.4	48.3	48.5	48.3	48.6
07:00 - 08:00	49.0	48.5	48.9	48.2	49.0	50.3	50.4
08:00 - 09:00	45.1	47.8	48.7	48.2	48.5	48.5	47.4
09:00 - 10:00	46.3	48.8	48.2	48.7	49.3	48.4	47.2
10:00 - 11:00	48.3	49.5	47.6	48.6	49.5	48.2	47.1
L90(avg)*	51.4	48.0	48.8	48.5	48.4	48.7	48.1

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

(Miss Katesarin Vorradetwittaya)  
 Environmental Scientist

Preeda S.  
 (Miss Preeda Somjai)  
 Technical Management Team



## Noise Monitoring Result : Community Noise

### MTR-PTTGC6-Refinery

Location : North of Refinery				Monitor Period : 13-20 Aug 2025			
SLM Model : Cirrus CR162B				Serial No : G302330			
Site Operator : Mr. Siwanon Kulawong							
Calibrator Model : Cirrus CR:515				Serial No : 97097			
Calibration Ref dB(A) : 94.0				Certified Date : 02 Oct 2024			
SLM Reading / Adjust dB(A) : 93.5/0.2				Expire Date : 01 Oct 2025			
Cal Sheet No.: CR-515-2025-203							
Time	Equivalent Sound Pressure Level (dB(A))						
	13-14 Aug 2025	14-15 Aug 2025	15-16 Aug 2025	16-17 Aug 2025	17-18 Aug 2025	18-19 Aug 2025	19-20 Aug 2025
10:00 - 11:00	68.1	67.5	68.1	67.7	68.5	68.7	68.9
11:00 - 12:00	70.6	67.6	67.8	67.8	68.9	68.2	68.8
12:00 - 13:00	67.2	67.2	67.8	67.5	68.9	68.1	68.8
13:00 - 14:00	67.3	67.5	68.0	67.4	68.6	68.5	68.9
14:00 - 15:00	67.6	67.4	68.2	67.5	68.5	68.4	68.7
15:00 - 16:00	67.3	67.5	68.1	67.8	68.4	68.7	68.7
16:00 - 17:00	67.4	67.5	68.0	67.8	68.4	68.7	68.8
17:00 - 18:00	67.2	67.5	68.3	67.5	68.2	67.9	68.5
18:00 - 19:00	66.7	67.6	67.9	68.8	68.2	68.5	68.3
19:00 - 20:00	66.9	67.5	67.7	68.0	68.1	68.6	68.1
20:00 - 21:00	67.1	67.5	67.6	67.7	67.4	68.4	67.9
21:00 - 22:00	67.1	67.3	67.5	67.9	67.3	68.2	67.0
22:00 - 23:00	67.3	67.2	67.8	67.5	67.9	68.1	66.9
23:00 - 00:00	67.6	67.1	67.8	67.0	68.0	68.0	67.2
00:00 - 01:00	67.1	67.0	67.4	67.8	67.6	67.8	67.8
01:00 - 02:00	66.7	67.0	67.4	67.6	67.7	67.9	68.3
02:00 - 03:00	66.8	67.4	67.6	68.3	67.9	67.9	68.0
03:00 - 04:00	67.0	67.7	67.6	68.1	67.9	67.8	68.2
04:00 - 05:00	67.1	67.6	67.6	67.8	67.9	68.1	67.8
05:00 - 06:00	67.1	67.4	67.8	67.3	68.1	68.1	67.4
06:00 - 07:00	67.3	67.2	67.5	67.5	68.1	67.9	67.4
07:00 - 08:00	67.5	67.3	67.4	67.6	68.1	67.7	67.6
08:00 - 09:00	67.7	67.7	67.8	68.0	68.5	68.9	68.7
09:00 - 10:00	67.9	67.9	67.5	68.2	68.6	69.1	70.4
Leq(24)*	67.5	67.4	67.8	67.8	68.2	68.3	68.3
Ldn	73.6	73.7	74.1	74.1	74.4	74.4	74.2
Lmax **	92.6	81.0	87.0	82.8	88.4	82.9	94.4
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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team



## Noise Monitoring Result : Background Noise

### MTR-PTTGC6-Refinery

Location : North of Refinery				Monitor Period : 13-20 Aug 2025			
SLM Model : Cirrus CR162B				Serial No : G302330			
Site Operator : Mr. Siwanon Kulawong							
Calibrator Model : Cirrus CR:515				Serial No : 97097			
Calibration Ref dB(A) : 94.0				Certified Date : 02 Oct 2024			
SLM Reading / Adjust dB(A) : 93.5/0.2				Expire Date : 01 Oct 2025			
Cal Sheet No.: CR-515-2025-203							
Time	L90 (dB(A))						
	13-14 Aug 2025	14-15 Aug 2025	15-16 Aug 2025	16-17 Aug 2025	17-18 Aug 2025	18-19 Aug 2025	19-20 Aug 2025
10:00 - 11:00	67.1	66.5	67.3	67.1	67.7	67.5	68.2
11:00 - 12:00	66.8	66.6	67.1	67.1	68.2	67.4	68.1
12:00 - 13:00	66.6	66.6	67.2	67.0	68.2	67.5	68.2
13:00 - 14:00	66.6	66.8	67.3	66.9	68.1	67.7	68.2
14:00 - 15:00	66.9	66.7	67.3	66.9	68.0	67.7	68.1
15:00 - 16:00	66.7	66.7	67.2	67.0	67.9	67.8	68.0
16:00 - 17:00	66.8	66.8	67.2	67.1	67.9	67.8	68.0
17:00 - 18:00	66.4	66.8	67.2	66.9	67.8	67.0	67.9
18:00 - 19:00	66.2	66.9	67.2	68.0	67.8	67.0	67.7
19:00 - 20:00	66.5	67.0	67.1	67.5	67.7	68.1	67.6
20:00 - 21:00	66.7	66.9	67.2	67.3	66.9	68.0	67.6
21:00 - 22:00	66.7	66.9	67.0	67.4	66.9	67.8	66.6
22:00 - 23:00	66.8	66.8	67.3	67.1	67.4	67.8	66.6
23:00 - 00:00	67.1	66.7	67.3	66.5	67.6	67.7	66.9
00:00 - 01:00	66.6	66.7	66.9	67.2	67.0	67.5	67.2
01:00 - 02:00	66.4	66.7	66.9	67.2	67.0	67.5	67.9
02:00 - 03:00	66.5	67.0	67.2	67.6	67.6	67.6	67.5
03:00 - 04:00	66.6	67.4	67.1	67.7	67.5	67.5	67.6
04:00 - 05:00	66.7	67.3	67.2	67.2	67.5	67.9	67.4
05:00 - 06:00	66.7	66.9	67.4	66.8	67.5	67.8	67.1
06:00 - 07:00	66.7	66.5	66.9	66.9	67.5	67.4	66.9
07:00 - 08:00	66.9	66.7	66.8	67.0	67.5	67.1	66.9
08:00 - 09:00	67.0	66.9	67.1	67.2	67.5	68.2	67.4
09:00 - 10:00	66.7	67.0	66.8	67.4	67.6	68.3	69.6
L90(avg)*	66.7	66.8	67.1	67.2	67.6	67.7	67.7

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

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

Preeda S.  
(Miss Preeda Somjai)  
Technical Management Team

## คุณภาพน้ำทิ้ง

---



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

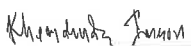
239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND  
TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No. :	1236/68
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 03/07/2025	SAMPLING TIME	: 14:48
RECEIVED DATE	: 04/07/2025	ANALYTICAL DATE	: 04-14/07/2025
REPORT DATE	: 14/07/2025	SITE OPERATOR	: Mr.Thanawut Duansaeng
SAMPLE CONDITION	: Normal	FILE CODE	: 225010_WW_July

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	
				น้ำเสียก่อนผ่านเข้า	STANDARD
				Neutralization Basin	
Flow Rate <sup>1/2</sup>	m <sup>3</sup> /hr			35	
Temperature	°C	2550 B	< 0.5	39.7	
pH		4500-H <sup>+</sup> B	< 0.10	6.41	
Total Dissolved Solids	mg/l	2540 C	< 25	746	
Total Suspended Solids	mg/l	2540 D	< 2.5	85	
Fat Oil & Grease	mg/l	5520 B	< 2.0	50.6	
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	0.66	
Phenols	mg/l	5530 B,D	< 0.10	2.4	
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	384	
COD	mg/l	5220 C	< 15.00	644	
Ammonia Nitrogen*	mg/l	4500-NH <sub>3</sub> B,C	< 0.02	50.7	
Arsenic (As)	mg/l	3114 C	< 0.0001	5.53	
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	
Lead (Pb)	mg/l	3120 B	< 0.008	ND	
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0349	

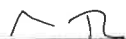
REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23<sup>rd</sup> ED. 2017 (AWWA,APHA, WEF)



(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-0005



(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

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

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

3. <sup>1/2</sup> Data from PTT Global Chemical Public Company Limited, Branch 6 (Refinery)

4. \* Not registered with the Department of Industrial Works.

5. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**


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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No. :	1452/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No. :	2-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 09:35
ANALYTICAL DATE	: 08-18/08/2025	SITE OPERATOR	: Miss Salisa Ainree
REPORT DATE	: 18/08/2025		: 2-239-ก-0039
SAMPLE CONDITION	: ค่าปูน	FILE CODE	: 225010_WW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	
				น้ำเสียก่อนผ่านเข้า	STANDARD
				Neutralization Basin	
Temperature	°C	2550 B	< 0.5	33.2	
pH		4500-H <sup>+</sup> B	< 0.10	6.88	
Total Dissolved Solids	mg/l	2540 C	< 25	820	
Total Suspended Solids	mg/l	2540 D	< 2.5	50	
Fat Oil & Grease	mg/l	5520 B	< 2.0	16.6	
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	0.30	
Phenols	mg/l	5530 B,D	< 0.10	2.7	
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	259	
COD	mg/l	5220 C	< 15.00	381	
Arsenic (As)	mg/l	3114 C	< 0.0001	3.16	
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	
Lead (Pb)	mg/l	3120 B	< 0.008	ND	
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0178	

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



(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-0005



(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

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

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

3. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No. :	1452/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No. :	*
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 09:35
ANALYTICAL DATE	: 07,08-15/08/2025	SITE OPERATOR	: Miss Salisa Ainree
REPORT DATE	: 18/08/2025		*
SAMPLE CONDITION	: ค่าขึ้น	FILE CODE	: 225010_WW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION น้ำเสียก่อนผ่านเข้า Neutralization Basin	STANDARD
Flow Rate <sup>1/</sup>	m <sup>3</sup> /hr	-	-	70	-
Ammonia Nitrogen	mg/l	4500-NH <sub>3</sub> B,C	< 0.02	36.8	-

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)  
Analyst

*AR*

(Mrs. Araya Tipparuk)  
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. <sup>1/</sup> Data from PTT Global Chemical Public Company Limited, Branch 6 (Refinery)

4. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No. :	1664/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No. :	ว-239
SAMPLING DATE	: 04/09/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 05/09/2025	SAMPLING TIME	: 09:22
ANALYTICAL DATE	: 05-11/09/2025	SITE OPERATOR	: Miss Wiraya Patchimboon
REPORT DATE	: 12/09/2025		ว-239-จ-0038
SAMPLE CONDITION	: ค่าขึ้น	FILE CODE	: 225010_WW_September

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION น้ำเสียก่อนผ่านเข้า Neutralization Basin	STANDARD
Temperature	°C	2550 B	< 0.5	39.8	-
pH	-	4500-H <sup>+</sup> B	< 0.10	6.27	-
Total Dissolved Solids	mg/l	2540 C	< 25	508	-
Total Suspended Solids	mg/l	2540 D	< 2.5	156	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	37.2	-
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	0.69	-
Phenols	mg/l	5530 B,D	< 0.10	2.60	-
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	305	-
COD	mg/l	5220 C	< 15.00	369	-
Arsenic (As)	mg/l	3114 C	< 0.0001	5.06	-
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	-
Lead (Pb)	mg/l	3120 B	< 0.008	ND	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0177	-

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)  
Analyst

REG. NO. ว-239-จ-0005

*AR*

(Mrs. Araya Tipparuk)  
Technical Management Team

REG. NO. ว-239-จ-0004

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

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

3. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1664/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. :  
SAMPLING DATE : 04/09/2025 SAMPLING METHOD : Grab  
RECEIVED DATE : 05/09/2025 SAMPLING TIME : 09:22  
ANALYTICAL DATE : 04.05-11/09/2025 SITE OPERATOR : Miss Wiraya Patchimboon  
REPORT DATE : 12/09/2025  
SAMPLE CONDITION : ค่าขึ้น FILE CODE : 225010\_WW\_September

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD
		METHODS	(non-detectable)	น้ำเสียก่อนผ่านเข้า	
				Neutralization Basin	
Flow Rate <sup>1)</sup>	m <sup>3</sup> /hr			50	
Ammonia Nitrogen	mg/l	4500-NH <sub>3</sub> B,C	< 0.02	31.1	

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

(Miss Khemchuda Insorn)

Analyst

(Mrs. Araya Tipparuk)

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. <sup>1)</sup> Data from PTT Global Chemical Public Company Limited, Branch 6 (Refinery)

4. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1868/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 02/10/2025 SAMPLING METHOD : Grab  
RECEIVED DATE : 03/10/2025 SAMPLING TIME : 09:49  
ANALYTICAL DATE : 03-09/10/2025 SITE OPERATOR : Mr. Aniwat Pimwanma  
REPORT DATE : 10/10/2025  
SAMPLE CONDITION : ค่าขึ้น FILE CODE : 225010\_WW\_October

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD
		METHODS	(non-detectable)	น้ำเสียก่อนผ่านเข้า	
				Neutralization Basin	
Temperature	°C	2550 B	< 0.5	43.6	+
pH		4500-H <sup>+</sup> B	< 0.10	6.38	+
Total Dissolved Solids	mg/l	2540 C	< 25	612	+
Total Suspended Solids	mg/l	2540 D	< 2.5	47	+
Fat Oil & Grease	mg/l	5520 B	< 2.0	17.9	+
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	4.4	+
Phenols	mg/l	5530 B,D	< 0.10	2.5	+
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	194	+
COD	mg/l	5220 C	< 15.00	511	+
Arsenic (As)	mg/l	3114 C	< 0.0001	2.46	+
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	+
Lead (Pb)	mg/l	3120 B	< 0.008	ND	+
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0098	+

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

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-0004

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

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

3. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1868/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : \*  
SAMPLING DATE : 02/10/2025 SAMPLING METHOD : Grab  
RECEIVED DATE : 03/10/2025 SAMPLING TIME : 09:49  
ANALYTICAL DATE : 02-09/10/2025 SITE OPERATOR : Mr. Aniwat Pimwanna  
REPORT DATE : 10/10/2025  
SAMPLE CONDITION : ค่าขึ้น FILE CODE : 225010\_WW\_October

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD
		METHODS	(non-detectable)	น้ำเสียก่อนผ่านเข้า	
				Neutralization Basin	
Flow Rate <sup>1/</sup>	m <sup>3</sup> /hr	-	-	58	-
Ammonia Nitrogen	mg/l	4500-NH <sub>3</sub> B,C	< 0.02	40.6	-

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)  
Analyst

*Araya Tipparuk*

(Mrs. Araya Tipparuk)  
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. <sup>1/</sup> Data from PTT Global Chemical Public Company Limited, Branch 6 (Refinery)

4. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 2224/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 20/11/2025 SAMPLING METHOD : Grab  
RECEIVED DATE : 21/11/2025 SAMPLING TIME : 13:53  
ANALYTICAL DATE : 21-28/11/2025 SITE OPERATOR : Mr. Aniwat Pimwanna  
REPORT DATE : 28/11/2025  
SAMPLE CONDITION : ค่าขึ้น FILE CODE : 225010\_WW\_November

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD
		METHODS	(non-detectable)	น้ำเสียก่อนผ่านเข้า	
				Neutralization Basin	
Temperature	°C	2550 B	< 0.5	27.8	*
pH	-	4500-H <sup>+</sup> B	< 0.10	6.89	*
Total Dissolved Solids	mg/l	2540 C	< 25	662	*
Total Suspended Solids	mg/l	2540 D	< 2.5	60	*
Fat Oil & Grease	mg/l	5520 B	< 2.0	11.9	*
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	1.7	*
Phenols	mg/l	5530 B,D	< 0.10	0.78	*
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	83.5	*
COD	mg/l	5220 C	< 15.00	222	*
Arsenic (As)	mg/l	3114 C	< 0.0001	1.27	*
Cadmium (Cd)	mg/l	3120 B	< 0.001	< 0.01	*
Lead (Pb)	mg/l	3120 B	< 0.008	ND	*
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0172	*

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-0004

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

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

3. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No. :	2224/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 20/11/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 21/11/2025	SAMPLING TIME	: 13:53
ANALYTICAL DATE	: 20-21/11/2025	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 28/11/2025	FILE CODE	: 225010_WW_November
SAMPLE CONDITION	: ค่าฝุ่น		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION น้ำเสียก่อนผ่านเข้า Neutralization Basin	STANDARD
Flow Rate <sup>1/</sup>	m <sup>3</sup> /hr	-	-	67	-
Ammonia Nitrogen	mg/l	4500-NH <sub>3</sub> B,C	< 0.02	3.2	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2012 (AWWA APHA WEF)

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

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. <sup>1/</sup> Data from PTT Global Chemical Public Company Limited, Branch 6 (Refinery)

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No. :	2325/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 04/12/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 05/12/2025	SAMPLING TIME	: 14:51
ANALYTICAL DATE	: 05-12/12/2025	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 12/12/2025	FILE CODE	: 2-239-ท-0007
SAMPLE CONDITION	: ค่าฝุ่น		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION น้ำเสียก่อนผ่านเข้า Neutralization Basin	STANDARD
Temperature	°C	2550 B	< 0.5	37.6	-
pH	-	4500-H <sup>+</sup> B	< 0.10	6.99	-
Total Dissolved Solids	mg/l	2540 C	< 25	724	-
Total Suspended Solids	mg/l	2540 D	< 2.5	66	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	71.6	-
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	1.7	-
Phenols	mg/l	5530 B,D	< 0.10	2.1	-
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	338	-
COD	mg/l	5220 C	< 15.00	739	-
Arsenic (As)	mg/l	3114 C	< 0.0001	2.46	-
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	-
Lead (Pb)	mg/l	3120 B	< 0.008	ND	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.2023	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24<sup>th</sup> ED. 2023 (AWWA APHA WEF)

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ท-0005

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

Technical Management Team

REG. NO. 2-239-ท-0004

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

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

3. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No. :	2325/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No. :	-
SAMPLING DATE	: 04/12/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 05/12/2025	SAMPLING TIME	: 14:51
ANALYTICAL DATE	: 05-12/12/2025	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 12/12/2025		
SAMPLE CONDITION	: ค่าปูน	FILE CODE	: 225010_WW_December

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION น้ำเสียก่อนผ่านเข้า Neutralization Basin	STANDARD
Flow Rate <sup>1/</sup>	m <sup>3</sup> /hr	-	-	68	-
Ammonia Nitrogen	mg/l	4500-NH <sub>3</sub> B,C	< 0.02	12.3	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24<sup>th</sup> ED. 2023 (AWWA,APHA, WEF)

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

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. <sup>1/</sup> Data from PTT Global Chemical Public Company Limited , Branch 6 ( Refinery)
  4. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No. :	1236/68
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 03/07/2025	SAMPLING TIME	: 14:21
RECEIVED DATE	: 04/07/2025	ANALYTICAL DATE	: 04-14/07/2025
REPORT DATE	: 14/07/2025	SITE OPERATOR	: Mr. Thanawut Duansaeng
SAMPLE CONDITION	: Normal	FILE CODE	: 225010_WW_July

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION น้ำเสียก่อนผ่านเข้า CPI	STANDARD
Flow Rate <sup>1/</sup>	m <sup>3</sup> /hr	-	-	63	-
Temperature	°C	2550 B	< 0.5	48.0	-
pH	-	4500-H <sup>+</sup> B	< 0.10	6.22	-
Total Dissolved Solids	mg/l	2540 C	< 25	480	-
Total Suspended Solids	mg/l	2540 D	< 2.5	6.0	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	7.8	-
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	1.2	-
Phenols	mg/l	5530 B,D	< 0.10	2.1	-
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	284	-
COD	mg/l	5220 C	< 15.00	479	-
Ammonia Nitrogen*	mg/l	4500-NH <sub>3</sub> B,C	< 0.02	42.0	-
Arsenic (As)	mg/l	3114 C	< 0.0001	3.80	-
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	-
Lead (Pb)	mg/l	3120 B	< 0.008	ND	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0077	-

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. ๖-239-ก-0005

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

Technical Management Team

REG. NO. ๖-239-ก-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Data from PTT Global Chemical Public Company Limited , Branch 6 ( Refinery)
  4. \* Not registered with the Department of Industrial Works.
  5. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1452/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 09:30
ANALYTICAL DATE	: 08-18/08/2025	SITE OPERATOR	: Miss Salisa Ainree
REPORT DATE	: 18/08/2025		: 2-239-ก-0039
SAMPLE CONDITION	: เหลืองขุ่นมีตะกอน	FILE CODE	: 225010_WW_August

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD
		METHODS	(non-detectable)	น้ำเสียก่อนผ่านเข้า CPI	
Temperature	°C	2550 B	< 0.5	33.2	-
pH	-	4500-H <sup>+</sup> B	< 0.10	6.78	-
Total Dissolved Solids	mg/l	2540 C	< 25	1,444	-
Total Suspended Solids	mg/l	2540 D	< 2.5	8.0	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	3.9	-
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	0.52	-
Phenols	mg/l	5530 B,D	< 0.10	3.1	-
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	318	-
COD	mg/l	5220 C	< 15.00	377	-
Arsenic (As)	mg/l	3114 C	< 0.0001	5.62	-
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	-
Lead (Pb)	mg/l	3120 B	< 0.008	ND	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0055	-

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1452/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 09:30
ANALYTICAL DATE	: 07,08-15/08/2025	SITE OPERATOR	: Miss Salisa Ainree
REPORT DATE	: 18/08/2025		: -
SAMPLE CONDITION	: เหลืองขุ่นมีตะกอน	FILE CODE	: 225010_WW_August

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD
		METHODS	(non-detectable)	น้ำเสียก่อนผ่านเข้า CPI	
Flow Rate <sup>1/</sup>	m <sup>3</sup> /hr	-	-	80	-
Ammonia Nitrogen	mg/l <sup>2</sup>	4500-NH <sub>3</sub> B,C	< 0.02	42.7	-

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Data from PTT Global Chemical Public Company Limited, Branch 6 (Refinery)
  4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No. :	1664/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No. :	จ-239
SAMPLING DATE	: 04/09/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 05/09/2025	SAMPLING TIME	: 09:41
ANALYTICAL DATE	: 05-11/09/2025	SITE OPERATOR	: Miss Wiraya Patchimboon
REPORT DATE	: 12/09/2025		: จ-239-ท-0038
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_WW_September

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD
		METHODS	(non-detectable)	น้ำเสียก่อนผ่านเข้า CPI	
Temperature	°C	2550 B	< 0.5	39.8	-
pH		4500-H <sup>+</sup> B	< 0.10	6.65	-
Total Dissolved Solids	mg/l	2540 C	< 25	416	-
Total Suspended Solids	mg/l	2540 D	< 2.5	6.2	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	3.8	-
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	0.96	-
Phenols	mg/l	5530 B,D	< 0.10	2.3	-
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	233	-
COD	mg/l	5220 C	< 15.00	319	-
Arsenic (As)	mg/l	3114 C	< 0.0001	4.36	-
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	-
Lead (Pb)	mg/l	3120 B	< 0.008	ND	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0022	-

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

(Miss Khemchuda Insorn)

Analyst

REG. NO. จ-239-ท-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. จ-239-ท-0004

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No. :	1664/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No. :	-
SAMPLING DATE	: 04/09/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 05/09/2025	SAMPLING TIME	: 09:41
ANALYTICAL DATE	: 04,05-11/09/2025	SITE OPERATOR	: Miss Wiraya Patchimboon
REPORT DATE	: 12/09/2025		: -
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_WW_September

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD
		METHODS	(non-detectable)	น้ำเสียก่อนผ่านเข้า CPI	
Flow Rate <sup>1/</sup>	m <sup>3</sup> /hr		-	55	-
Ammonia Nitrogen	mg/l	4500-NH <sub>3</sub> B,C	< 0.02	20.0	-

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

(Miss Khemchuda Insorn)

Analyst

REG. NO. จ-239-ท-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. จ-239-ท-0004

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Data from PTT Global Chemical Public Company Limited , Branch 6 (Refinery)
  4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No. :	1868/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 02/10/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 03/10/2025	SAMPLING TIME	: 09:33
ANALYTICAL DATE	: 03-09/10/2025	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 10/10/2025		: 2-239-ก-0007
SAMPLE CONDITION	: ค่าฝุ่น	FILE CODE	: 225010_WW_October

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION น้ำเสียก่อนผ่านเข้า CPI	STANDARD
Temperature	°C	2550 B	< 0.5	44.6	-
pH		4500-H <sup>+</sup> B	< 0.10	5.67	-
Total Dissolved Solids	mg/l	2540 C	< 25	526	-
Total Suspended Solids	mg/l	2540 D	< 2.5	64.0	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	34.8	-
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	3.00	-
Phenols	mg/l	5530 B,D	< 0.10	2.4	-
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	192	-
COD	mg/l	5220 C	< 15.00	479	-
Arsenic (As)	mg/l	3114 C	< 0.0001	3.43	-
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	-
Lead (Pb)	mg/l	3120 B	< 0.008	ND	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0060	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23<sup>rd</sup> ED. 2017 (AWWA-APHA-WEF)

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No. :	1868/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: *
SAMPLING DATE	: 02/10/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 03/10/2025	SAMPLING TIME	: 09:33
ANALYTICAL DATE	: 02-09/10/2025	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 10/10/2025		: *
SAMPLE CONDITION	: ค่าฝุ่น	FILE CODE	: 225010_WW_October

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION น้ำเสียก่อนผ่านเข้า CPI	STANDARD
Flow Rate <sup>1/</sup>	m <sup>3</sup> /hr	-	-	65	-
Ammonia Nitrogen	mg/l	4500-NH <sub>3</sub> B,C	< 0.02	36.4	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23<sup>rd</sup> ED. 2017 (AWWA-APHA-WEF)

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Data from PTT Global Chemical Public Company Limited, Branch 6 (Refinery)
  4. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No. :	2111/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No. :	จ-239
SAMPLING DATE	: 06/11/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/11/2025	SAMPLING TIME	: 08:40
ANALYTICAL DATE	: 07-14/11/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 15/11/2025		: จ-239-จ-0025
SAMPLE CONDITION	: คำนุ่น	FILE CODE	: 225010_WW_November

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION น้ําลือก่อนผ่านเข้า CPI	STANDARD
Temperature	°C	2550 B	< 0.5	29.2	-
pH		4500-H <sup>+</sup> B	< 0.10	12.11	-
Total Dissolved Solids	mg/l	2540 C	< 25	2,572	-
Total Suspended Solids	mg/l	2540 D	< 2.5	11	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	36.6	-
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	6.5	-
Phenols	mg/l	5530 B,D	< 0.10	42.5	-
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	226	-
COD	mg/l	5220 C	< 15.00	1,962	-
Arsenic (As)	mg/l	3114 C	< 0.0001	7.75	-
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	-
Lead (Pb)	mg/l	3120 B	< 0.008	ND	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.2122	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24<sup>th</sup> ED. 2021 (AWWA, APHA, WEF)

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. จ-239-ก-0005

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

Technical Management Team

REG. NO. จ-239-ก-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No. :	2111/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No. :	-
SAMPLING DATE	: 06/11/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/11/2025	SAMPLING TIME	: 08:40
ANALYTICAL DATE	: 06-11/11/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 15/11/2025		: -
SAMPLE CONDITION	: คำนุ่น	FILE CODE	: 225010_WW_November

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION น้ําลือก่อนผ่านเข้า CPI	STANDARD
Flow Rate <sup>1/</sup>	m <sup>3</sup> /hr	-	-	45	-
Ammonia Nitrogen	mg/l	4500-NH <sub>3</sub> B,C	< 0.02	7.4	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24<sup>th</sup> ED. 2021 (AWWA, APHA, WEF)

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. จ-239-ก-0005

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

Technical Management Team

REG. NO. จ-239-ก-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Data from PTT Global Chemical Public Company Limited , Branch 6 (Refinery)
  4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	2325/68
SAMPLING BY	SECOT Co., Ltd.	REGISTRATION No.	จ-239
SAMPLING DATE	04/12/2025	SAMPLING METHOD	Grab
RECEIVED DATE	05/12/2025	SAMPLING TIME	14:16
ANALYTICAL DATE	05-12/12/2025	SITE OPERATOR	Mr. Aniwat Pimwanna
REPORT DATE	12/12/2025		จ-239-ก-0007
SAMPLE CONDITION	เหลือจุ่ม	FILE CODE	225010_WW_December

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD
		METHODS	(non-detectable)	น้ำเสียก่อนผ่านเข้า CPI	
Temperature	°C	2550 B	< 0.5	38.9	-
pH	-	4500-H <sup>+</sup> B	< 0.10	7.41	-
Total Dissolved Solids	mg/l	2540 C	< 25	584	-
Total Suspended Solids	mg/l	2540 D	< 2.5	3.0	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	3.3	-
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	1.5	-
Phenols	mg/l	5530 B,D	< 0.10	2.5	-
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	242	-
COD	mg/l	5220 C	< 15.00	505	-
Arsenic (As)	mg/l	3114 C	< 0.0001	2.59	-
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	-
Lead (Pb)	mg/l	3120 B	< 0.008	ND	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.1216	-

REFERENCE - STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24<sup>th</sup> ED. 2021 (AWWA APHA WEF)

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. จ-239-ก-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. จ-239-ก-0004

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	2325/68
SAMPLING BY	SECOT Co., Ltd.	REGISTRATION No.	-
SAMPLING DATE	04/12/2025	SAMPLING METHOD	Grab
RECEIVED DATE	05/12/2025	SAMPLING TIME	14:16
ANALYTICAL DATE	05-12/12/2025	SITE OPERATOR	Mr. Aniwat Pimwanna
REPORT DATE	12/12/2025		-
SAMPLE CONDITION	เหลือจุ่ม	FILE CODE	225010_WW_December

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD
		METHODS	(non-detectable)	น้ำเสียก่อนผ่านเข้า CPI	
Flow Rate <sup>1/</sup>	m <sup>3</sup> /hr.	-	-	30	-
Ammonia Nitrogen	mg/l	4500-NH <sub>3</sub> B,C	< 0.02	24.8	-

REFERENCE - STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24<sup>th</sup> ED. 2021 (AWWA APHA WEF)

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. จ-239-ก-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. จ-239-ก-0004

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Data from PTT Global Chemical Public Company Limited, Branch 6 (Refinery)
  4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1236/68
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 03/07/2025	SAMPLING TIME	: 14:33
RECEIVED DATE	: 04/07/2025	ANALYTICAL DATE	: 04-14/07/2025
REPORT DATE	: 14/07/2025	SITE OPERATOR	: Mr.Thanawut Duansaeng
SAMPLE CONDITION	: Normal	FILE CODE	: 225010_WW_July

PARAMETER	UNIT	ANALYSIS METHOD	ND (non-detectable)	STATION น้ำทิ้งหลังผ่านการบำบัดที่ Observation Basin		STANDARD <sup>1/</sup>
Flow Rate <sup>2/</sup>	m <sup>3</sup> /hr	-	-	75	-	-
Temperature	°C	2550 B	< 0.5	33.1	≤ 40	
pH	-	4500-H <sup>+</sup> B	< 0.10	6.95	5.5-9.0	
Total Dissolved Solids	mg/l	2540 C	< 25	1,296	≤ 39,280 <sup>3/</sup>	
Total Suspended Solids	mg/l	2540 D	< 2.5	< 2.5	≤ 50	
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5	
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	ND	≤ 1	
Phenols	mg/l	5530 B,C	< 0.001	ND	≤ 1	
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	< 1.0	≤ 20	
COD	mg/l	5220 C	< 15.00	36.13	≤ 120	
Ammonia Nitrogen*	mg/l	Method 350.2	< 0.02	0.06	-	
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0460	≤ 0.25	
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 0.03	
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 0.2	
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005	
Benzene*	µg/l	5030 C / 8260 D	< 0.20	ND	-	

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23<sup>rd</sup> ED. 2011 (IAWWA APHA, WEF)

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 3<sup>rd</sup> ED. 2020

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2560 (2017).

4. <sup>2/</sup> Data from PTT Global Chemical Public Company Limited, Branch 6 (Refinery)

5. <sup>3/</sup> In case of discharging effluent into water resources containing TDS of more than 3,000 mg/l, TDS in the effluent to be discharged must exceed TDS in the water resources by not more than 5,000 mg/l (Measurement Results of Coastal Water on July 03, 2025 found to be 34,280 mg/l therefore the Standard of TDS found to be 39,280 mg/l).

6. \* Not registered with the Department of Industrial Works.

7. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1452/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 09:41
ANALYTICAL DATE	: 08-18/08/2025	SITE OPERATOR	: Miss Salisa Ainree
REPORT DATE	: 18/08/2025		: 7-239-ก-0039
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 225010_WW_August

PARAMETER	UNIT	ANALYSIS METHOD	ND (non-detectable)	STATION น้ำทิ้งหลังผ่านการบำบัดที่ Observation Basin		STANDARD <sup>1/</sup>
Temperature	°C	2550 B	< 0.5	33.0	≤ 40	
pH	-	4500-H <sup>+</sup> B	< 0.10	7.56	5.5-9.0	
Total Dissolved Solids	mg/l	2540 C	< 25	1,424	≤ 40,640 <sup>2/</sup>	
Total Suspended Solids	mg/l	2540 D	< 2.5	4.4	≤ 50	
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5	
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	ND	≤ 1	
Phenols	mg/l	5530 B,C	< 0.001	ND	≤ 1	
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	1.7	≤ 20	
COD	mg/l	5220 C	< 15.00	42.64	≤ 120	
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0277	≤ 0.25	
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 0.03	
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 0.2	
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005	

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23<sup>rd</sup> ED. 2017 (IAWWA APHA, WEF)

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, Regarding Industrial Effluent Standards, B.E.2560 (2017).

4. <sup>2/</sup> In case of discharging effluent into water resources containing TDS of more than 3,000 mg/l, TDS in the effluent to be discharged must exceed TDS in the water resources by not more than 5,000 mg/l (Measurement Results of Coastal Water on August 07, 2025 found to be 35,640 mg/l therefore the Standard of TDS found to be 40,640 mg/l).

5. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME	PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	1452/68
SAMPLING BY	SECOT Co., Ltd.	REGISTRATION No.	-
SAMPLING DATE	07/08/2025	SAMPLING METHOD	Grab
RECEIVED DATE	08/08/2025	SAMPLING TIME	09:41
ANALYTICAL DATE	07/08-15/08/2025	SITE OPERATOR	Miss Salisa Ainree
REPORT DATE	18/08/2025		-
SAMPLE CONDITION	เหลือไฮโดรคาร์บอน	FILE CODE	225010_WW_August

PARAMETER	UNIT	ANALYSIS METHOD	ND (non-detectable)	STATION	STANDARD
				น้ำทิ้งหลังผ่านการบำบัดที่ Observation Basin	
Flow Rate <sup>1/</sup>	m <sup>3</sup> /hr	-	-	60	-
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	0.05	-
Benzene	µg/l	5030 C / 8260 D	< 0.20	ND	-

REFERENCE : US EPA 1283, Method for Chemical Analysis of Water and Waste, USEPA, EPA 600/4-79/020, Method 350.2.

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020.

(Miss Khemchuda Insorn)

Analyst

(Mrs. Araya Tipparuk)

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. <sup>1/</sup> Data from PTT Global Chemical Public Company Limited, Branch 6 (Refinery)

4. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME	PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	1664/68
SAMPLING BY	SECOT Co., Ltd.	REGISTRATION No.	ว-239
SAMPLING DATE	04/09/2025	SAMPLING METHOD	Grab
RECEIVED DATE	05/09/2025	SAMPLING TIME	09:31
ANALYTICAL DATE	05-11/09/2025	SITE OPERATOR	Miss Wiraya Patchimboon
REPORT DATE	12/09/2025		ว-239-0-0038
SAMPLE CONDITION	เหลือไขมัน	FILE CODE	225010_WW_September

PARAMETER	UNIT	ANALYSIS METHOD	ND (non-detectable)	STATION	STANDARD <sup>1/</sup>
				น้ำทิ้งหลังผ่านการบำบัดที่ Observation Basin	
Temperature	°C	2550 B	< 0.5	34.3	≤ 40
pH	-	4500-H <sup>+</sup> B	< 0.10	7.67	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 2.5	1.882	≤ 37,780 <sup>2/</sup>
Total Suspended Solids	mg/l	2540 D	< 2.5	6.8	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	ND	≤ 1
Phenols	mg/l	5530 B,C	< 0.001	ND	≤ 1
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 C	< 15.00	25.37	≤ 120
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0703	≤ 0.25
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 0.03
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 0.2
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

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

(Miss Khemchuda Insorn)

Analyst

REG. NO. ว-239-0-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. ว-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, Regarding Industrial Effluent Standards, B.E.2560 (2017).

4. <sup>2/</sup> In case of discharging effluent into water resources containing TDS of more than 3,000 mg/l, TDS in the effluent to be discharged must exceed TDS in the water resources by not more than 5,000 mg/l (Measurement Results of Coastal Water on September 04, 2025

found to be 32,780 mg/l therefore the Standard of TDS found to be 37,780 mg/l).

5. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1664/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 04/09/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 05/09/2025	SAMPLING TIME	: 09:31
ANALYTICAL DATE	: 04,05-11/09/2025	SITE OPERATOR	: Miss Wiraya Patchimboon
REPORT DATE	: 12/09/2025	FILE CODE	: 225010_WW_September
SAMPLE CONDITION	: เหลืองจูน		

PARAMETER	UNIT	ANALYSIS METHOD	ND (non-detectable)	STATION น้ำทิ้งหลังผ่านการบำบัดที่ Observation Basin	STANDARD
Flow Rate <sup>1/</sup>	m <sup>3</sup> /hr	-	-	65	-
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	0.15	-
Benzene	µg/l	5030 C / 8260 D	< 0.20	ND	-

REFERENCE : USEPA, 1983, Method for Chemical Analysis of Water and Waste, USEPA, EPA 600/4-79/020, Method 350.2.

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED., 2020.

(Miss Khemchuda Insom)

Analyst

(Mrs. Araya Tipparuk)

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. <sup>1/</sup> Data from PTT Global Chemical Public Company Limited, Branch 6 (Refinery)

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1868/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 02/10/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 03/10/2025	SAMPLING TIME	: 09:43
ANALYTICAL DATE	: 03-09/10/2025	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 10/10/2025	FILE CODE	: 7-239-0-0007
SAMPLE CONDITION	: เหลืองใส		

PARAMETER	UNIT	ANALYSIS METHOD	ND (non-detectable)	STATION น้ำทิ้งหลังผ่านการบำบัดที่ Observation Basin	STANDARD <sup>1/</sup>
Temperature	°C	2550 B	< 0.5	33.6	≤ 40
pH	-	4500-H <sup>+</sup> B	< 0.10	7.16	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	1,134	≤ 24,000 <sup>2/</sup>
Total Suspended Solids	mg/l	2540 D	< 2.5	3.8	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	ND	≤ 1
Phenols	mg/l	5530 B,C	< 0.001	ND	≤ 1
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 C	< 15.00	28.58	≤ 120
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0424	≤ 0.25
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 0.03
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 0.2
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

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

(Miss Khemchuda Insom)

Analyst

REG. NO. 7-239-0-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, Regarding Industrial Effluent Standards, B.E.2560 (2017).

4. <sup>2/</sup> In case of discharging effluent into water resources containing TDS of more than 3,000 mg/l, TDS in the effluent to be discharged must exceed TDS in the water resources by not more than 5,000 mg/l (Measurement Results of Coastal Water on October 02, 2025 found to be 19,000 mg/l therefore the Standard of TDS found to be 24,000 mg/l).

5. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1868/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 02/10/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 03/10/2025	SAMPLING TIME	: 09:43
ANALYTICAL DATE	: 02-09/10/2025	SITE OPERATOR	: Mr. Aniwat Pimwana
REPORT DATE	: 10/10/2025		
SAMPLE CONDITION	: เหลืองใส	FILE CODE	: 225010_WW_October

PARAMETER	UNIT	ANALYSIS METHOD	ND (non-detectable)	STATION	STANDARD
				น้ำทิ้งหลังผ่านการบำบัดที่ Observation Basin	
Flow Rate <sup>u</sup>	m <sup>3</sup> /hr	-	-	70	-
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	0.04	-
Benzene	µg/l	5030 C / 8260 D	< 0.20	ND	-

REFERENCE : US EPA 1983, Method for Chemical Analysis of Water and Waste, USEPA, EPA 600/4-79/020, Method 350.2.

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2010.

(Miss Khemchuda Insorn)  
Analyst

(Mrs. Araya Tipparuk)  
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. <sup>u</sup> Data from PTT Global Chemical Public Company Limited, Branch 6 (Refinery)
  4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 2111/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 06/11/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/11/2025	SAMPLING TIME	: 08:30
ANALYTICAL DATE	: 07-14/11/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 15/11/2025		: 7-239-7-0025
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 225010_WW_November

PARAMETER	UNIT	ANALYSIS METHOD	ND (non-detectable)	STATION	STANDARD <sup>u</sup>
				น้ำทิ้งหลังผ่านการบำบัดที่ Observation Basin	
Temperature	°C	2550 B	< 0.5	30.1	≤ 40
pH	-	4500-H <sup>+</sup> B	< 0.10	7.40	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	692	≤ 31,560 <sup>y</sup>
Total Suspended Solids	mg/l	2540 D	< 2.5	< 2.5	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	ND	≤ 1
Phenols	mg/l	5530 B,C	< 0.001	ND	≤ 1
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 C	< 15.00	15.70	≤ 120
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0450	≤ 0.25
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 0.03
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 0.2
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24<sup>th</sup> ED. 2021 (AWWA APHA, WEF)

(Miss Khemchuda Insorn)  
Analyst

REG. NO. 7-239-n-0005

(Mrs. Araya Tipparuk)  
Technical Management Team

REG. NO. 7-239-n-0004

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>u</sup> Notification of the Ministry of Industry, Regarding Industrial Effluent Standards, B.E.2560 (2017).
  4. <sup>y</sup> In case of discharging effluent into water resources containing TDS of more than 3,000 mg/l, TDS in the effluent to be discharged must exceed TDS in the water resources by not more than 5,000 mg/l (Measurement Results of Coastal Water on November 06, 2025 found to be 26,560 mg/l therefore the Standard of TDS found to be 31,560 mg/l).
  5. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 2111/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/11/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/11/2025	SAMPLING TIME	: 08:30
ANALYTICAL DATE	: 06-11/11/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 15/11/2025	FILE CODE	: 225010_WW_November
SAMPLE CONDITION	: เหลือไอซีตะกอน		

PARAMETER	UNIT	ANALYSIS METHOD	ND (non-detectable)	STATION น้ำทิ้งหลังผ่านการบำบัดที่ Observation Basin	STANDARD
Flow Rate <sup>1/</sup>	m <sup>3</sup> /hr	-	-	80	-
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	0.07	-
Benzene	µg/l	5030 C / 8260 D	< 0.20	ND	-

REFERENCE : US EPA, 1993, Method for Chemical Analysis of Water and Waste, USEPA, EPA 600/4-79/020, Method 350.2.

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020.

*Khemchuda Inorn*

(Miss Khemchuda Inorn)

Analyst

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

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. <sup>1/</sup> Data from PTT Global Chemical Public Company Limited, Branch 6 (Refinery)

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 2325/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 04/12/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 05/12/2025	SAMPLING TIME	: 14:37
ANALYTICAL DATE	: 05-12/12/2025	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 12/12/2025	FILE CODE	: 7-239-ท-0007
SAMPLE CONDITION	: เหลือไอซีตะกอน		

PARAMETER	UNIT	ANALYSIS METHOD	ND (non-detectable)	STATION น้ำทิ้งหลังผ่านการบำบัดที่ Observation Basin	STANDARD <sup>1/</sup>
Temperature	°C	2550 B	< 0.5	32.1	≤ 40
pH	-	4500-H <sup>+</sup> B	< 0.10	7.99	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	1,398	≤ 32,480 <sup>2/</sup>
Total Suspended Solids	mg/l	2540 D	< 2.5	4.0	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5
Sulfide as H <sub>2</sub> S	mg/l	4500-S <sup>2-</sup> F	< 0.20	ND	≤ 1
Phenols	mg/l	5530 B,C	< 0.001	ND	≤ 1
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 C	< 15.00	34.99	≤ 120
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0571	≤ 0.25
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 0.03
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 0.2
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0009	≤ 0.005

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24<sup>th</sup> ED., 2023 (AWWA, APHA, WEF)

*Khemchuda Inorn*

(Miss Khemchuda Inorn)

Analyst

REG. NO. 7-239-ท-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ท-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, Regarding Industrial Effluent Standards, B.E.2560 (2017).

4. <sup>2/</sup> In case of discharging effluent into water resources containing TDS of more than 3,000 mg/l, TDS in the effluent to be discharged must exceed TDS in the water resources by not more than 5,000 mg/l (Measurement Results of Coastal Water on December 04, 2025 found to be 27,480 mg/l therefore the Standard of TDS found to be 32,480 mg/l).

5. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 2325/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 04/12/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 05/12/2025	SAMPLING TIME	: 14:37
ANALYTICAL DATE	: 05-12/12/2025	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 12/12/2025		
SAMPLE CONDITION	: เหลืองใสสะอาด	FILE CODE	: 225010_WW_December

PARAMETER	UNIT	ANALYSIS METHOD	ND (non-detectable)	STATION	STANDARD
				น้ำทิ้งหลังผ่านการบำบัดที่ Observation Basin	
Flow Rate <sup>1/</sup>	m <sup>3</sup> /hr			130	
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	0.03	
Benzene	μg/l	5030 C / 8260 D	< 0.20	ND	

REFERENCE : US EPA 1983, Method for Chemical Analysis of Water and Waste, USEPA, EPA 600/4-79/020, Method 350.2.

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED. 2020.

*Khemchuda Insom*

(Miss Khemchuda Insom)

Analyst

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

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. <sup>1/</sup> Data from PTT Global Chemical Public Company Limited, Branch 6 (Refinery)

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1236/68
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 03/07/2025	SAMPLING TIME	: 14:06
RECEIVED DATE	: 04/07/2025	ANALYTICAL DATE	: 04-14/07/2025
REPORT DATE	: 14/07/2025	SITE OPERATOR	: Mr. Thanawut Duansaeng
SAMPLE CONDITION	: Normal	FILE CODE	: 225010_WW_July

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD <sup>1/</sup>
				น้ำ LLOD-S	
Temperature	°C	2550 B	< 0.5	31.5	≤ 40
pH		4500-H <sup>+</sup> B	< 0.10	8.14	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	1,156	≤ 39,280 <sup>2/</sup>
Total Suspended Solids	mg/l	2540 D	< 2.5	< 2.5	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 C	< 15.00	24.84	≤ 120

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

*Khemchuda Insom*

(Miss Khemchuda Insom)

Analyst

REG. NO. 2-239-R-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-R-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2560 (2017).

4. <sup>2/</sup> In case of discharging effluent into water resources containing TDS of more than 3,000 mg/l, TDS in the effluent to be discharged must exceed TDS in the water resources by not more than 5,000 mg/l (Measurement Results of Coastal Water on July 03, 2025 found to be 34,280 mg/l therefore the Standard of TDS found to be 39,280 mg/l).

4. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1452/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 09:16
ANALYTICAL DATE	: 08-18/08/2025	SITE OPERATOR	: Miss Salisa Ainree
REPORT DATE	: 18/08/2025		: 7-239-0-0039
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 225010_WW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION บ่อ LLOD-S	STANDARD <sup>1/</sup>
Temperature	°C	2550 B	< 0.5	32.5	≤ 40
pH	-	4500-H <sup>+</sup> B	< 0.10	8.95	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	1,424	≤ 40,640 <sup>2/</sup>
Total Suspended Solids	mg/l	2540 D	< 2.5	6.0	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	2.2	≤ 20
COD	mg/l	5220 C	< 15.00	27.68	≤ 120

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-0-0005

*Mrs. Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, Regarding Industrial Effluent Standards, B.E.2560 (2017).

4. <sup>2/</sup> In case of discharging effluent into water resources containing TDS of more than 3,000 mg/l, TDS in the effluent to be discharged must exceed TDS in the water resources by not more than 5,000 mg/l (Measurement Results of Coastal Water on August 07, 2025 found to be 35,640 mg/l therefore the Standard of TDS found to be 40,640 mg/l).

5. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1664/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 04/09/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 05/09/2025	SAMPLING TIME	: 09:15
ANALYTICAL DATE	: 05-11/09/2025	SITE OPERATOR	: Miss Wiraya Patchimboon
REPORT DATE	: 12/09/2025		: 7-239-0-0038
SAMPLE CONDITION	: เหลืองใส	FILE CODE	: 225010_WW_September

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION บ่อ LLOD-S	STANDARD <sup>1/</sup>
Temperature	°C	2550 B	< 0.5	30.6	≤ 40
pH	-	4500-H <sup>+</sup> B	< 0.10	8.09	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	1,324	≤ 37,780 <sup>2/</sup>
Total Suspended Solids	mg/l	2540 D	< 2.5	4.2	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	3.2	≤ 20
COD	mg/l	5220 C	< 15.00	22.62	≤ 120

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-0-0005

*Mrs. Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, Regarding Industrial Effluent Standards, B.E.2560 (2017).

4. <sup>2/</sup> In case of discharging effluent into water resources containing TDS of more than 3,000 mg/l, TDS in the effluent to be discharged must exceed TDS in the water resources by not more than 5,000 mg/l (Measurement Results of Coastal Water on September 04, 2025 found to be 32,780 mg/l therefore the Standard of TDS found to be 37,780 mg/l).

5. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	1868/68
SAMPLING BY	SECOT Co., Ltd.	REGISTRATION No.	7-239
SAMPLING DATE	02/10/2025	SAMPLING METHOD	Grab
RECEIVED DATE	03/10/2025	SAMPLING TIME	09:19
ANALYTICAL DATE	03-09/10/2025	SITE OPERATOR	Mr. Aniwat Pimwanna
REPORT DATE	10/10/2025		7-239-จ-0007
SAMPLE CONDITION	เหลือียงุ่น	FILE CODE	225010_WW_October

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION บ่อ LLOD-S	STANDARD <sup>u</sup>
Temperature	°C	2550 B	< 0.5	32.0	≤ 40
pH		4500-H <sup>+</sup> B	< 0.10	7.16	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	702	≤ 24,000 <sup>u</sup>
Total Suspended Solids	mg/l	2540 D	< 2.5	5.0	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	1.2	≤ 20
COD	mg/l	5220 C	< 15.00	< 15.00	≤ 120

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-จ-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ท-0004

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

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

3. <sup>u</sup> Notification of the Ministry of Industry, Regarding Industrial Effluent Standards, B.E.2560 (2017).

4. <sup>u</sup> In case of discharging effluent into water resources containing TDS of more than 3,000 mg/l, TDS in the effluent to be discharged must exceed TDS in the water resources by not more than 5,000 mg/l (Measurement Results of Coastal Water on October 02, 2025 found to be 19,000 mg/l therefore the Standard of TDS found to be 24,000 mg/l).

5. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	2111/68
SAMPLING BY	SECOT Co., Ltd.	REGISTRATION No.	7-239
SAMPLING DATE	06/11/2025	SAMPLING METHOD	Grab
RECEIVED DATE	07/11/2025	SAMPLING TIME	08:15
ANALYTICAL DATE	07-14/11/2025	SITE OPERATOR	Mr. Jeerawat Khotamhan
REPORT DATE	15/11/2025		7-239-จ-0025
SAMPLE CONDITION	เหลือียงุ่น	FILE CODE	225010_WW_November

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION บ่อ LLOD-S	STANDARD <sup>u</sup>
Temperature	°C	2550 B	< 0.5	27.9	≤ 40
pH		4500-H <sup>+</sup> B	< 0.10	7.83	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	60	≤ 31,560 <sup>u</sup>
Total Suspended Solids	mg/l	2540 D	< 2.5	6.8	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	1.2	≤ 20
COD	mg/l	5220 C	< 15.00	23.54	≤ 120

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24<sup>th</sup> ED. 2021 (AWWA APHA WEF)

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ท-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ท-0004

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

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

3. <sup>u</sup> Notification of the Ministry of Industry, Regarding Industrial Effluent Standards, B.E.2560 (2017).

4. <sup>u</sup> In case of discharging effluent into water resources containing TDS of more than 3,000 mg/l, TDS in the effluent to be discharged must exceed TDS in the water resources by not more than 5,000 mg/l (Measurement Results of Coastal Water on November 06, 2025 found to be 26,560 mg/l therefore the Standard of TDS found to be 31,560 mg/l).

5. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 2325/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 04/12/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 05/12/2025	SAMPLING TIME	: 14:00
ANALYTICAL DATE	: 05-12/12/2025	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 12/12/2025		: 7-239-0-0007
SAMPLE CONDITION	: เหลือของไขมันตะกอน	FILE CODE	: 225010_WW_December

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD <sup>1/</sup>
				ข้อ LLOD-S	
Temperature	°C	2550 B	< 0,5	31.3	≤ 40
pH		4500-H <sup>+</sup> B	< 0.10	7.53	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	870	≤ 32,480 <sup>2/</sup>
Total Suspended Solids	mg/l	2540 D	< 2.5	2.5	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	3.3	≤ 20
COD	mg/l	5220 C	< 15.00	34.99	≤ 120

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

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-R-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-R-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, Regarding Industrial Effluent Standards, B.E.2560 (2017).
  4. <sup>2/</sup> In case of discharging effluent into water resources containing TDS of more than 3,000 mg/l, TDS in the effluent to be discharged must exceed TDS in the water resources by not more than 5,000 mg/l (Measurement Results of Coastal Water on December 04, 2025 found to be 27,480 mg/l therefore the Standard of TDS found to be 32,480 mg/l).
  5. - Not available.

## คุณภาพน้ำทะเล

---



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Company Limited , REQUEST SERVICE No. : 1237/68  
Branch 6 (Refinery) SAMPLING METHOD : Grab  
SAMPLING BY : SECOT Co., Ltd. SAMPLING TIME : 11:39  
SAMPLING DATE : 03/07/2025 ANALYTICAL DATE : 04-14/07/2025  
RECEIVED DATE : 04/07/2025 SITE OPERATOR : Mr. Thanawut Duansaeng  
REPORT DATE : 14/07/2025 FILE CODE : 225010\_CW\_July  
SAMPLE CONDITION : Normal

PARAMETER	UNIT	ANALYSIS METHODS	ND (non detectable)	STATION
				จุดปล่อยน้ำทิ้งที่ผ่านการบำบัด ทางด้านทิศใต้ของโรงกลั่นน้ำมัน
Temperature	°C	2550 B	< 0.5	31.2
pH	-	4500-H <sup>+</sup> B	< 0.10	8.16
Total Dissolved Solids	mg/l	2540 C	< 25	34,280
Total Suspended Solids	mg/l	2540 D	< 2.5	21
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND
Fat Oil & Grease	-	Visual Testing	-	NV
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	5.2
COD	mg/l	5220 C	< 15.00	96.36

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

(Miss Khemichuda Insorn)  
Analyst

(Mrs. Araya Tipparuk)  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Company Limited , REQUEST SERVICE No. : 1451/68  
Branch 6 (Refinery)  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : -  
SAMPLING DATE : 07/08/2025 SAMPLING METHOD : Grab  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 15:04  
ANALYTICAL DATE : 08-18/08/2025 SITE OPERATOR : Mr. Baworn Deechaia  
REPORT DATE : 18/08/2025  
SAMPLE CONDITION : ใส FILE CODE : 225010\_CW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non detectable)	STATION
				จุดปล่อยน้ำทิ้งที่ผ่านการบำบัด ทางด้านทิศใต้ของโรงกลั่นน้ำมัน
Temperature	°C	2550 B	< 0.5	29.8
pH	-	4500-H <sup>+</sup> B	< 0.10	7.98
Total Dissolved Solids	mg/l	2540 C	< 25	35,640
Total Suspended Solids	mg/l	2540 D	< 2.5	9.7
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND
Fat Oil & Grease	-	Visual Testing	-	NV
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	1.4
COD	mg/l	5220 C	< 15.00	46.38

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

(Miss Khemichuda Insorn)  
Analyst

(Mrs. Araya Tipparuk)  
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. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical Public Company Limited ,	REQUEST SERVICE No.	: 1663/68
	Branch 6 (Refinery)		
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 04/09/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 05/09/2025	SAMPLING TIME	: 11:13
ANALYTICAL DATE	: 05-11/09/2025	SITE OPERATOR	: Miss Wiraya Patchimboon
REPORT DATE	: 12/09/2025		
SAMPLE CONDITION	: เหลืองใส	FILE CODE	: 225010_CW_September

PARAMETER	UNIT	ANALYSIS METHODS	ND (non detectable)	STATION
				จุดปล่อยน้ำทิ้งที่ผ่านการบำบัด ทางคานทิศใต้ของโรงกลั่นน้ำมัน
Temperature	°C	2550 B	< 0.5	30.4
pH	-	4500-H <sup>+</sup> B	< 0.10	8.10
Total Dissolved Solids	mg/l	2540 C	< 25	32,780
Total Suspended Solids	mg/l	2540 D	< 2.5	11
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND
Fat Oil & Grease	-	Visual Testing	-	NV
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	2.3
COD	mg/l	5220 C	< 15.00	98.04

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

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

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. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**WATER AND WASTEWATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical Public Company Limited ,	REQUEST SERVICE No.	: 1867/68
	Branch 6 (Refinery)		
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 02/10/2025	SAMPLING METHOD	: Grab
RECEIVED DATE	: 03/10/2025	SAMPLING TIME	: 10:20
ANALYTICAL DATE	: 03-09/10/2025	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 10/10/2025		
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_CW_October

PARAMETER	UNIT	ANALYSIS METHODS	ND (non detectable)	STATION
				จุดปล่อยน้ำทิ้งที่ผ่านการบำบัด ทางคานทิศใต้ของโรงกลั่นน้ำมัน
Temperature	°C	2550 B	< 0.5	31.7
pH	-	4500-H <sup>+</sup> B	< 0.10	7.70
Total Dissolved Solids	mg/l	2540 C	< 25	19,000
Total Suspended Solids	mg/l	2540 D	< 2.5	22
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND
Fat Oil & Grease	-	Visual Testing	-	NV
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	< 1.0
COD	mg/l	5220 C	< 15.00	47.63

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

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Company Limited , REQUEST SERVICE No. : 2110/68  
Branch 6 (Refinery)  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : -  
SAMPLING DATE : 06/11/2025 SAMPLING METHOD : Grab  
RECEIVED DATE : 07/11/2025 SAMPLING TIME : 11:00  
ANALYTICAL DATE : 07-14/11/2025 SITE OPERATOR : Mr. Jeerawat Khotamhan  
REPORT DATE : 15/11/2025  
SAMPLE CONDITION : เติืองไม่มีตะกอน FILE CODE : 225010\_CW\_November

PARAMETER	UNIT	ANALYSIS METHODS	ND (non detectable)	STATION
				จุดปล่อยน้ำทิ้งที่ผ่านการบำบัด ทางด้านทิศใต้ของโรงกลั่นน้ำมัน
Temperature	°C	2550 B	< 0.5	30.9
pH		4500-H <sup>+</sup> B	< 0.10	8.51
Total Dissolved Solids	mg/l	2540 C	< 25	26,560
Total Suspended Solids	mg/l	2540 D	< 2.5	10
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND
Fat Oil & Grease	-	Visual Testing		NV
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	< 1.0
COD	mg/l	5220 C	< 15.00	35.32

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24<sup>th</sup> ED. 2023 (AWWA APHA, WEF)

( Miss Khemchuda Insorn )

Analyst

( Mrs. Araya Tipparuk )

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical Public Company Limited , REQUEST SERVICE No. : 2324/68  
Branch 6 (Refinery)  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : -  
SAMPLING DATE : 04/12/2025 SAMPLING METHOD : Grab  
RECEIVED DATE : 05/12/2025 SAMPLING TIME : 15:38  
ANALYTICAL DATE : 05-12/12/2025 SITE OPERATOR : Mr. Aniwat Pimwanna  
REPORT DATE : 12/12/2025  
SAMPLE CONDITION : เติืองมีตะกอน FILE CODE : 225010\_CW\_December

PARAMETER	UNIT	ANALYSIS METHODS	ND (non detectable)	STATION
				จุดปล่อยน้ำทิ้งที่ผ่านการบำบัด ทางด้านทิศใต้ของโรงกลั่นน้ำมัน
Temperature	°C	2550 B	< 0.5	34.1
pH		4500-H <sup>+</sup> B	< 0.10	7.73
Total Dissolved Solids	mg/l	2540 C	< 25	27,480
Total Suspended Solids	mg/l	2540 D	< 2.5	14
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND
Fat Oil & Grease	-	Visual Testing		NV
BOD <sub>5</sub>	mg/l	5210 B	< 1.0	< 1.0
COD	mg/l	5220 C	< 15.00	73.87

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24<sup>th</sup> ED. 2023 (AWWA APHA, WEF)

( Miss Khemchuda Insorn )

Analyst

( Mrs. Araya Tipparuk )

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. - Not available.

## คุณภาพน้ำใต้ดิน

---



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 14:53-15:24
ANALYTICAL DATE	: 07, 08-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 2-239-ก-0025
SAMPLE CONDITION	: เหลือจุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-1	STANDARD <sup>1)</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	6.68	U
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0757	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 07/08/2025	SAMPLING TIME	: 14:53-15:24
ANALYTICAL DATE	: 07/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 2-239-ก-0025
SAMPLE CONDITION	: เหลือจุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-1	STANDARD
Conductivity	μS/cm	2510 B	< 1.0	340	-
Salinity	ppt	2520 B	< 0.01	0.09	-

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

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. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 14:53-15:24
ANALYTICAL DATE	: 08-12/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืออยู่	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD <sup>1/</sup>
				MW-1	
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 14:53-15:24
ANALYTICAL DATE	: 08-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืออยู่	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD <sup>1/</sup>
		METHODS	(non-detectable)	MW-1	
Total Petroleum Hydrocarbons					
- TPH (C <sub>3</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>9</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>32</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Tricontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 07/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 14:53-15:24  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลืออยู่ FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-1	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 1<sup>st</sup> ED. 2017 (AWWA APHA WEF)

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 07/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 15:54-16:28  
ANALYTICAL DATE : 07, 08-18/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลืออยู่ FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-2	STANDARD <sup>1/</sup>
pH		4500-H <sup>+</sup> B	< 0.10	6.32	11
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	< 0.01	≤ 5.0

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 1<sup>st</sup> ED. 2017 (AWWA APHA WEF)

Khemchuda Insom

( Miss Khemchuda Insom )

Analyst

REG. NO. 7-239-0-0005

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1687/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 05/09/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/09/2025	SAMPLING TIME	: 09:30-09:41
ANALYTICAL DATE	: 06/08/09/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 15/09/2025	FILE CODE	: 225010_GW_September
SAMPLE CONDITION	: เหลืองใส		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-2	STANDARD "
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0939	≤ 0.1

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

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: *
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 14:53-15:24
ANALYTICAL DATE	: 18-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-1	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	*
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	*
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	*
Endrin ketone	mg/l	6630 B	< 0.000003	ND	*

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

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 07/08/2025	SAMPLING TIME	: 15:54-16:28
ANALYTICAL DATE	: 07/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		
SAMPLE CONDITION	: เหลืองปูน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-2	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	586	*
Salinity	ppt	2520 B	< 0.01	0.21	*

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)  
Analyst

*Araya Tipparuk*

(Mrs. Araya Tipparuk)  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 15:54-16:28
ANALYTICAL DATE	: 08-12/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืองปูน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-2	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA, WEF)

*Jutarat Jaemruen*

(Miss Jutarat Jaemruen)  
Analyst

REG. NO. 7-239-0-0022

*Araya Tipparuk*

(Mrs. Araya Tipparuk)  
Technical Management Team

REG. NO. 7-239-0-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 15:54-16:28
ANALYTICAL DATE	: 08-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-9-0025
SAMPLE CONDITION	: เหลืองปูน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-2	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>5</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>8</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>32</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED., 2020.

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

(Signature)

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 15:54-16:28
ANALYTICAL DATE	: 08-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-9-0025
SAMPLE CONDITION	: เหลืองปูน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-2	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>5</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>8</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>32</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED., 2020.

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

(Signature)

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 07/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 15:54-16:28  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลืองปูน

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-2	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : -  
SAMPLING DATE : 07/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 15:54-16:28  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : -  
SAMPLE CONDITION : เหลืองปูน

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-2	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 15/08/2025	SAMPLING TIME	: 11:12-11:28
ANALYTICAL DATE	: 13,15-22/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025	FILE CODE	: 2-239-n-0025
SAMPLE CONDITION	: ต้นทุน		: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-3	STANDARD <sup>1)</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	6.51	1)
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0738	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-n-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-n-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/08/2025	SAMPLING TIME	: 11:12-11:28
ANALYTICAL DATE	: 13/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025	FILE CODE	: 2-239-n-0025
SAMPLE CONDITION	: ต้นทุน		: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-3	STANDARD
Conductivity	μS/cm	2510 B	< 1.0	595	
Salinity	ppt	2520 B	< 0.01	0.26	

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

(Miss Khemchuda Insorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1501/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 2-239  
SAMPLING DATE : 13/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 15/08/2025 SAMPLING TIME : 11:12-11:28  
ANALYTICAL DATE : 15-19/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 : 2-239-ก-0025  
SAMPLE CONDITION : ต้นุ่น FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD <sup>1/</sup>
				MW-3	
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 17<sup>th</sup> ED. 2017 (AWWA APHA WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 2-239-ก-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1501/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 2-239  
SAMPLING DATE : 13/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 15/08/2025 SAMPLING TIME : 11:12-11:28  
ANALYTICAL DATE : 18-23/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 : 2-239-ก-0025  
SAMPLE CONDITION : ต้นุ่น FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD
				MW-3	
Total Petroleum Hydrocarbons					
- TPH (C <sub>5</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>9</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>35</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triscontane					
- n-Dotriacontane					
- n-Tetracontane					
- n-Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2000

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-ก-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 15/08/2025	SAMPLING TIME	: 11:12-11:28
ANALYTICAL DATE	: 21-22/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 2-239-ก-0025
SAMPLE CONDITION	: สุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-3	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-ก-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1/</sup> Notification of the Ministry of Industry. Regarding Soil and Groundwater Pollution Standards B.E.2559 (2016).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 15/08/2025	SAMPLING TIME	: 11:12-11:28
ANALYTICAL DATE	: 21-22/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: -
SAMPLE CONDITION	: สุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-3	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	
Endrin ketone	mg/l	6630 B	< 0.000003	ND	

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 15/08/2025	SAMPLING TIME	: 14:03-14:22
ANALYTICAL DATE	: 13,15-22/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-R-0025
SAMPLE CONDITION	: ตัวอย่าง	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-4	STANDARD <sup>u</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	7.00	u
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0560	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

REG. NO. 7-239-R-0005

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-R-0004

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

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

3. <sup>u</sup> Notification of the Ministry of Industry..B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/08/2025	SAMPLING TIME	: 14:03-14:22
ANALYTICAL DATE	: 13/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-R-0025
SAMPLE CONDITION	: ตัวอย่าง	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-4	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	657	-
Salinity	ppt	2520 B	< 0.01	0.30	-

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

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL. Branch 6 (Refinery)	REQUEST SERVICE No	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 15/08/2025	SAMPLING TIME	: 14:03-14:22
ANALYTICAL DATE	: 15-19/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: สุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-4	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>ST</sup> ED. 2017 (AWWA-APHA-WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

(Mrs. Araya Tipparak)

Technical Management Team

REG. NO. 7-239-0-0004

- Remark : 1. Reported analysis refers to submitted sample only.
2. This report shall not be reproduced, except in full, without official approval.
3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL. Branch 6 (Refinery)	REQUEST SERVICE No	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 15/08/2025	SAMPLING TIME	: 14:03-14:22
ANALYTICAL DATE	: 18-23/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: สุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-4	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>9</sub> - C <sub>16</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentene					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>9</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>9</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE: US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>ST</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparak)

Technical Management Team

REG. NO. 7-239-0-0004

- Remark : 1. Reported analysis refers to submitted sample only.
2. This report shall not be reproduced, except in full, without official approval.
3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1501/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 2-239  
SAMPLING DATE : 13/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 15/08/2025 SAMPLING TIME : 14:03-14:22  
ANALYTICAL DATE : 21-22/08/2025 SITE OPERATOR : Mr. Jeerawat Khotamhan  
REPORT DATE : 26/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : สัมบูรณ์

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-4	STANDARD <sup>u</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 2-239-0-0004

(Mrs. Araya Tipparuk)  
Technical Management Team

REG. NO. 2-239-0-0004

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

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

3. <sup>u</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1501/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 2-239  
SAMPLING DATE : 13/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 15/08/2025 SAMPLING TIME : 14:03-14:22  
ANALYTICAL DATE : 21-22/08/2025 SITE OPERATOR : Mr. Jeerawat Khotamhan  
REPORT DATE : 26/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : สัมบูรณ์

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-4	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

(Mrs. Araya Tipparuk)  
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. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 15/08/2025	SAMPLING TIME	: 10:29-10:44
ANALYTICAL DATE	: 13,15-22/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 2-239-0-0025
SAMPLE CONDITION	: ฟิล์ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-5	STANDARD <sup>1/</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	7.08	11
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0599	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2017 (AWWA, AHA, WEF)

( Miss Khemchuda Insom )

Analyst

REG. NO. 2-239-0-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/08/2025	SAMPLING TIME	: 10:29-10:44
ANALYTICAL DATE	: 13/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: -
SAMPLE CONDITION	: ฟิล์ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-5	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	908	-
Salinity	ppt	2520 B	< 0.01	0.44	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2017 (AWWA, AHA, WEF)

( Miss Khemchuda Insom )

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1501/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 13/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 15/08/2025 SAMPLING TIME : 10:29-10:44  
ANALYTICAL DATE : 15-19/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : สัมป่วน

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-5	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.0005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA, APHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1501/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 13/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 15/08/2025 SAMPLING TIME : 10:29-10:44  
ANALYTICAL DATE : 18-23/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : สัมป่วน

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-5	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>3</sub> - C <sub>6</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>7-8</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>7-16</sub> - C <sub>33</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- n-Pentatriacontane					
- n-Hexatriacontane					

REFERENCE : US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2000

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 15/08/2025	SAMPLING TIME	: 10:29-10:44
ANALYTICAL DATE	: 21-22/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-9-0025
SAMPLE CONDITION	: ต้นปูน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-5	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 15/08/2025	SAMPLING TIME	: 10:29-10:44
ANALYTICAL DATE	: 21-22/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-9-0025
SAMPLE CONDITION	: ต้นปูน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-5	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 15/08/2025	SAMPLING TIME	: 09:58-10:10
ANALYTICAL DATE	: 13.15-22/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025	FILE CODE	: 2-239-0-0025
SAMPLE CONDITION	: สุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-6	STANDARD <sup>1)</sup>
pH		4500-H <sup>+</sup> B	< 0.10	6.47	1)
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0290	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-n-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-n-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: *
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/08/2025	SAMPLING TIME	: 09:58-10:10
ANALYTICAL DATE	: 13/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025	FILE CODE	: *
SAMPLE CONDITION	: สุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-6	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	2,515	*
Salinity	ppt	2520 B	< 0.01	1.4	*

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

(Miss Khemchuda Insorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 15/08/2025	SAMPLING TIME	: 09:58-10:10
ANALYTICAL DATE	: 15-19/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: สัมบูรณ์	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-6	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA-APHA-WF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 15/08/2025	SAMPLING TIME	: 09:58-10:10
ANALYTICAL DATE	: 18-23/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: สัมบูรณ์	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-6	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>5</sub> - C <sub>10</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>11</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>17</sub> - C <sub>25</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetraatriacontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1501/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 13/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 15/08/2025 SAMPLING TIME : 09:58-10:10  
ANALYTICAL DATE : 21-22/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-9-0025  
SAMPLE CONDITION : สุ่ม FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-6	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

*(Mrs. Araya Tipparuk)*

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1501/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 13/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 15/08/2025 SAMPLING TIME : 09:58-10:10  
ANALYTICAL DATE : 21-22/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-9-0025  
SAMPLE CONDITION : สุ่ม FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-6	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	≤ 0.04
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin ketone	mg/l	6630 B	< 0.000003	ND	≤ 0.03

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

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

*(Mrs. Araya Tipparuk)*

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. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 09:19-09:45
ANALYTICAL DATE	: 08, 11-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025	FILE CODE	: 2-239-0-0025
SAMPLE CONDITION	: สัมบูรณ์		: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-7	STANDARD <sup>1/</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	6.84	U
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0408	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

(Miss Khemchuda Insom)

Analyst

REG. NO. 2-239-0-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 09:19-09:45
ANALYTICAL DATE	: 08/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025	FILE CODE	: 2-239-0-0025
SAMPLE CONDITION	: สัมบูรณ์		: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-7	STANDARD
Conductivity	μS/cm	2510 B	< 1.0	1.815	*
Salinity	ppt	2520 B	< 0.01	0.87	*

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

(Miss Khemchuda Insom)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิมลคลองประปา 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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 09:19-09:45
ANALYTICAL DATE	: 15-19/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-9-0025
SAMPLE CONDITION	: สุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-7	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.0005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 23<sup>rd</sup> ED. 2017 (AWWA, Apha, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-n-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิมลคลองประปา 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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 09:19-09:45
ANALYTICAL DATE	: 18-23/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-9-0025
SAMPLE CONDITION	: สุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-7	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>3</sub> - C <sub>8</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>9</sub> - C <sub>10</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>33</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetatriacontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-n-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1483/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 08/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 11/08/2025 SAMPLING TIME : 09:19-09:45  
ANALYTICAL DATE : 21-22/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-9-0025  
SAMPLE CONDITION : สัมผัส FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-7	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

*Araya T.*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>V</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1483/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : \*  
SAMPLING DATE : 08/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 11/08/2025 SAMPLING TIME : 09:19-09:45  
ANALYTICAL DATE : 21-22/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : \*  
SAMPLE CONDITION : สัมผัส FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-7	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

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

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

*Araya T.*

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 09:02-09:28
ANALYTICAL DATE	: 07, 08-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 7-239-9-0025
SAMPLE CONDITION	: เหลือจุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-8	STANDARD <sup>1/</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	6.85	1/
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0154	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 22<sup>nd</sup> ED. 2017 (AWWA APHA WEF)

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

REG. NO. 7-239-9-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 07/08/2025	SAMPLING TIME	: 09:02-09:28
ANALYTICAL DATE	: 07/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 7-239-9-0025
SAMPLE CONDITION	: เหลือจุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-8	STANDARD
Conductivity	μS/cm	2510 B	< 1.0	2.395	
Salinity	ppt	2520 B	< 0.01	1.2	

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 22<sup>nd</sup> ED. 2017 (AWWA APHA WEF)

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 09:02-09:28
ANALYTICAL DATE	: 08-12/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืออยู่	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD <sup>1/</sup>
				MW-8	
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA-APHA-WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 09:02-09:28
ANALYTICAL DATE	: 08-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืออยู่	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD
		METHODS	(non-detectable)	MW-8	
Total Petroleum Hydrocarbons					
- TPH (C <sub>5</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>10</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>17</sub> - C <sub>32</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE: US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 07/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 09:02-09:28  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 : 7-239-9-0025  
SAMPLE CONDITION : เหลือถัง FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-8	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 7-239-9-0004

(Mrs. Araya Tipparuk)  
Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 07/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 09:02-09:28  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 : 7-239-9-0025  
SAMPLE CONDITION : เหลือถัง FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-8	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	≤ 0.04
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin ketone	mg/l	6630 B	< 0.000003	ND	≤ 0.003

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

(Mrs. Araya Tipparuk)  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1396/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 01/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 02/08/2025	SAMPLING TIME	: 09:46-10:01
ANALYTICAL DATE	: 01, 02-05/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 18/08/2025	FILE CODE	: 2-239-9-0025
SAMPLE CONDITION	: เหลืออ่างปูน		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-09	STANDARD <sup>u</sup>
pH		4500-H <sup>+</sup> B	< 0.10	7.24	u
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0024	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2017 (AWWA, ACPHA, WEF)

( Miss Khemchuda Insorn )

Analyst

REG. NO. 2-239-R-0005

( Mrs. Araya Tipparuk )

Technical Management Team

REG. NO. 2-239-R-0004

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

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

3. <sup>u</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1396/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 01/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 01/08/2025	SAMPLING TIME	: 09:46-10:01
ANALYTICAL DATE	: 01/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 18/08/2025	FILE CODE	: 2-239-9-0025
SAMPLE CONDITION	: เหลืออ่างปูน		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-09	STANDARD
Conductivity	µS/cm	2510 B	≤ 1.0	2.201	-
Salinity	ppt	2520 B	< 0.01	1.0	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2017 (AWWA, ACPHA, WEF)

( Miss Khemchuda Insorn )

Analyst

( Mrs. Araya Tipparuk )

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 09:46-10:01  
ANALYTICAL DATE : 04-12/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลืออยู่ FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-09	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.0005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry. B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 09:46-10:01  
ANALYTICAL DATE : 04-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลืออยู่ FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-09	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>3</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>9</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>35</sub> )	mg/l	3510 C / 8015 D	< 0.050	0.076	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetatriacontane					
- n-Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2022

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry. B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 09:46-10:01  
ANALYTICAL DATE : 04-14/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือของขึ้น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-09	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : -  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 09:46-10:01  
ANALYTICAL DATE : 04-14/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือของขึ้น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-09	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	
Endrin ketone	mg/l	6630 B	< 0.000003	ND	

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 09:58-10:22
ANALYTICAL DATE	: 07, 08-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 2-239-9-0025
SAMPLE CONDITION	: เหลือจุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-10	STANDARD <sup>1)</sup>
pH		4500-H <sup>+</sup> B	< 0.10	7.64	W
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0021	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)  
Analyst  
REG. NO. 2-239-9-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)  
Technical Management Team  
REG. NO. 2-239-9-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: *
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 07/08/2025	SAMPLING TIME	: 09:58-10:22
ANALYTICAL DATE	: 07/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: *
SAMPLE CONDITION	: เหลือจุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-10	STANDARD
Conductivity	μS/cm	2510 B	< 1.0	2.410	*
Salinity	ppt	2520 B	< 0.01	1.2	*

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)  
Analyst

*Araya Tipparuk*

(Mrs. Araya Tipparuk)  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL., Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 09:58-10:22
ANALYTICAL DATE	: 08-12/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลือสูง	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-10	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA, APHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination,



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL., Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 09:58-10:22
ANALYTICAL DATE	: 08-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลือสูง	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-10	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>3</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>9</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>35</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 07/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 09:58-10:22  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khotamhan  
REPORT DATE : 26/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-10	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 7-239-ท-0001

(Mrs. Araya Tipparuk)  
Technical Management Team

REG. NO. 7-239-ท-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : -  
SAMPLING DATE : 07/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 09:58-10:22  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khotamhan  
REPORT DATE : 26/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-10	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

(Mrs. Araya Tipparuk)  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1396/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 01/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 02/08/2025	SAMPLING TIME	: 10:19-10:32
ANALYTICAL DATE	: 01, 02-05/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 18/08/2025	FILE CODE	: 2-239-8-0025
SAMPLE CONDITION	: เหลือถัง		: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-11	STANDARD <sup>1)</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	7.62	U
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0023	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2017 (AWWA, APTHA, WEF)

( Miss Khemchuda Insorn )

Analyst

REG. NO. 2-239-8-0004

( Mrs. Araya Tipparuk )

Technical Management Team

REG. NO. 2-239-8-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1396/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 01/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 01/08/2025	SAMPLING TIME	: 10:19-10:32
ANALYTICAL DATE	: 01/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 18/08/2025	FILE CODE	: 2-239-8-0025
SAMPLE CONDITION	: เหลือถัง		: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-11	STANDARD
Conductivity	μS/cm	2510 B	< 1.0	834	U
Salinity	ppt	2520 B	< 0.01	0.35	U

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2017 (AWWA, APTHA, WEF)

( Miss Khemchuda Insorn )

Analyst

( Mrs. Araya Tipparuk )

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 10:19-10:32  
ANALYTICAL DATE : 04-12/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-11	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA, APHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

AR

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 10:19-10:32  
ANALYTICAL DATE : 04-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-11	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>5</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>9</sub> - C <sub>10</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>10</sub> - C <sub>15</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- n-Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

AR

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 10:19-10:32  
ANALYTICAL DATE : 04-14/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025  
SAMPLE CONDITION : เหลือถุงปูน FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-11	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tipparuk)  
Technical Management Team

REG. NO. 7-239-9-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 10:19-10:32  
ANALYTICAL DATE : 04-14/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025  
SAMPLE CONDITION : เหลือถุงปูน FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-11	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

(Mrs. Araya Tipparuk)  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 10:52-11:28
ANALYTICAL DATE	: 07, 08-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 2-239-ก-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-12	STANDARD <sup>1)</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	7.57	11
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0076	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

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 Ministry of Industry-B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: *
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 07/08/2025	SAMPLING TIME	: 10:52-11:28
ANALYTICAL DATE	: 07/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: *
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-12	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	12,760	-
Salinity	ppt	2520 B	< 0.01	7.2	-

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 10:52-11:28
ANALYTICAL DATE	: 08-12/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 2-239-0-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-12	STANDARD <sup>1)</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 2-239-0-0022

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical RCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 10:52-11:28
ANALYTICAL DATE	: 08-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 2-239-0-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-12	STANDARD <sup>1)</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>7</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>10</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>19</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE: US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-0-0001

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL. Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 10:52-11:28
ANALYTICAL DATE	: 18-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืออยู่	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD <sup>1)</sup>
		METHODS	(non-detectable)	MW-12	
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL. Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 10:52-11:28
ANALYTICAL DATE	: 18-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืออยู่	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD
		METHODS	(non-detectable)	MW-12	
delta-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	≤ 0.04
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin ketone	mg/l	6630 B	< 0.000003	ND	≤ 0.003

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 14:07-14:26  
ANALYTICAL DATE : 01, 02-05/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-13	STANDARD <sup>1)</sup>
pH		4500-H <sup>+</sup> B	< 0.10	7.77	"
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0018	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

( Miss Khemchuda Insorn )

Analyst

REG. NO. 7-239-0-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : \*  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 01/08/2025 SAMPLING TIME : 14:07-14:26  
ANALYTICAL DATE : 01/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : \*  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-13	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	571	-
Salinity	ppt	2520 B	< 0.01	0.21	-

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

( Miss Khemchuda Insorn )

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 14:07-14:26  
ANALYTICAL DATE : 04-12/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เกลือจาง FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-13	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.0005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 14:07-14:26  
ANALYTICAL DATE : 04-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เกลือจาง FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-13	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>5</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>9</sub> - C <sub>10</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>9</sub> - C <sub>10</sub> )	mg/l	3510 C / 8015 D	< 0.050	0.090	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 14:07-14:26  
ANALYTICAL DATE : 04-14/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025  
SAMPLE CONDITION : เหลืออยู่ FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-13	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2017 (AWWA-APHA-WF)

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

Mrs. Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

- Remark :** 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 14:07-14:26  
ANALYTICAL DATE : 04-14/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025  
SAMPLE CONDITION : เหลืออยู่ FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-13	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2017 (AWWA-APHA-WF)

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

Mrs. Araya Tipparuk

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 13:53-14:22
ANALYTICAL DATE	: 07, 08-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 2-239-0-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-14	STANDARD <sup>1)</sup>
pH		4500-H <sup>+</sup> B	< 0.10	7.61	"
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0047	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

( Miss Khemchuda Insorn )  
Analyst  
REG. NO. 2-239-R-0005

(Mrs. Araya Tipparuk)  
Technical Management Team  
REG. NO. 2-239-R-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.  
4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: *
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 07/08/2025	SAMPLING TIME	: 13:53-14:22
ANALYTICAL DATE	: 07/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: *
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-14	STANDARD
Conductivity	μS/cm	2510 B	< 1.0	8.053	-
Salinity	ppt	2520 B	< 0.01	4.4	-

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

( Miss Khemchuda Insorn )  
Analyst

(Mrs. Araya Tipparuk)  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL. Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 13:53-14:22
ANALYTICAL DATE	: 08-12/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025	FILE CODE	: 7-239-0-0025
SAMPLE CONDITION	: เหลืออยู่		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-14	STANDARD <sup>u</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED 2017 (AWWA APHA WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>u</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL. Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 07/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 13:53-14:22
ANALYTICAL DATE	: 08-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025	FILE CODE	: 7-239-0-0025
SAMPLE CONDITION	: เหลืออยู่		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-14	STANDARD <sup>u</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>3</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>9</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>32</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 5<sup>th</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>u</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 07/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 13:53-14:22  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือจุน

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-14	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2017 (IAWWA-APHA-WEF)

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 07/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 13:53-14:22  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือจุน

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-14	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	*
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	*
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	*
Endrin ketone	mg/l	6630 B	< 0.000003	ND	*

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2017 (IAWWA-APHA-WEF)

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 10:52-11:16  
ANALYTICAL DATE : 01, 02-05/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 7-239-V-0025  
SAMPLE CONDITION : เหลือของขึ้น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-15	STANDARD <sup>1)</sup>
pH		4500-H <sup>+</sup> B	< 0.10	7.54	U
Arsenic (As)	mg/l	3114 C	< 0.0001	< 0.0005	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2011 (AWWA-APHA-WEF)

*Khemchuda Insom*

( Miss Khemchuda Insom )

Analyst

REG. NO. 7-239-R-0005

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

Technical Management Team

REG. NO. 7-239-R-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 01/08/2025 SAMPLING TIME : 10:52-11:16  
ANALYTICAL DATE : 01/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 7-239-V-0025  
SAMPLE CONDITION : เหลือของขึ้น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-15	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	1.036	-
Salinity	ppt	2520 B	< 0.01	0.47	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2011 (AWWA-APHA-WEF)

*Khemchuda Insom*

( Miss Khemchuda Insom )

Analyst

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 10:52-11:16  
ANALYTICAL DATE : 04-12/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-15	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.0005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

*Jutarat Jaermuen*

(Miss Jutarat Jaermuen)

Analyst

REG. NO. 7-239-0-0022

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 10:52-11:16  
ANALYTICAL DATE : 04-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-15	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>7</sub> - C <sub>6</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>8</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>32</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- n-Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED. 2020

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 2-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 10:52-11:16  
ANALYTICAL DATE : 04-14/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 2-239-9-0025  
SAMPLE CONDITION : เหลือจุ่ม

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-15	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

*Sudaporn S.*  
(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 2-239-9-0001

*Araya T*  
(Mrs. Araya Tipparuk)  
Technical Management Team

REG. NO. 2-239-9-0004

- Remark :** 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : -  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 10:52-11:16  
ANALYTICAL DATE : 04-14/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 2-239-9-0025  
SAMPLE CONDITION : เหลือจุ่ม

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-15	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

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

*Sudaporn S.*  
(Miss Sudaporn Soonthorn)  
Analyst

*Araya T*  
(Mrs. Araya Tipparuk)  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 08:58-09:23
ANALYTICAL DATE	: 06, 08-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 2-239-ก-0025
SAMPLE CONDITION	: เกลือจาง	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-16	STANDARD <sup>1)</sup>
pH	-	4500-H B	< 0.10	7.70	1)
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0038	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 22<sup>nd</sup> ED. 2012 (AWWA-APHA-WEF)

*Khemchuda Insorn*

( Miss Khemchuda Insorn )  
Analyst  
REG. NO. 2-239-ก-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)  
Technical Management Team  
REG. NO. 2-239-ก-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: *
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 08:58-09:23
ANALYTICAL DATE	: 06/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: *
SAMPLE CONDITION	: เกลือจาง	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-16	STANDARD
Conductivity	μS/cm	2510 B	< 1.0	1.876	-
Salinity	ppt	2520 B	< 0.01	0.89	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 22<sup>nd</sup> ED. 2012 (AWWA-APHA-WEF)

*Khemchuda Insorn*

( Miss Khemchuda Insorn )  
Analyst

*Araya Tipparuk*

(Mrs. Araya Tipparuk)  
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. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 08:58-09:23
ANALYTICAL DATE	: 08-12/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-16	STANDARD <sup>1)</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

Jutarat Jaermuen

(Miss Jutarat Jaermuen)

Analyst

REG. NO. 7-239-0-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 08:58-09:23
ANALYTICAL DATE	: 08-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-16	STANDARD <sup>1)</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>7</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>8</sub> - C <sub>10</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>35</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 06/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 08:58-09:23  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-9-0025  
SAMPLE CONDITION : เหลืออยู่ FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-16	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tipparuk)  
Technical Management Team

REG. NO. 7-239-9-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1)</sup> Notification of the Ministry of Industry. Regarding Soil and Groundwater Pollution Standards B.E.2559 (2016).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : -  
SAMPLING DATE : 06/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 08:58-09:23  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : -  
SAMPLE CONDITION : เหลืออยู่ FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-16	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

(Mrs. Araya Tipparuk)  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 14:41-14:59  
ANALYTICAL DATE : 01, 02-05/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือ่งุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-17	STANDARD <sup>1/</sup>
pH		4500-H <sup>+</sup> B	< 0.10	7.93	M
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0076	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

REG. NO. 7-239-R-0005

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-R-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : -  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 01/08/2025 SAMPLING TIME : 14:41-14:59  
ANALYTICAL DATE : 01/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือ่งุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-17	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	275	-
Salinity	ppt	2520 B	< 0.01	0.06	-

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

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 14:41-14:59  
ANALYTICAL DATE : 04-12/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 REGISTRATION No. : 7-239-9-0025  
SAMPLE CONDITION : เหลือขุ่น FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-17	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.0005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 14:41-14:59  
ANALYTICAL DATE : 04-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 REGISTRATION No. : 7-239-9-0025  
SAMPLE CONDITION : เหลือขุ่น FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-17	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>3</sub> - C <sub>8</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>9</sub> - C <sub>10</sub> )	mg/l	3510 C / 8015 D	< 0.025	0.029	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>33</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 3<sup>rd</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 14:41-14:59  
ANALYTICAL DATE : 04-14/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือจุ่ม

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-17	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>ST</sup> ED. 2017 (AWWA APHA, WEF)

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : -  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 14:41-14:59  
ANALYTICAL DATE : 04-14/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือจุ่ม

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-17	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	
Endrin ketone	mg/l	6630 B	< 0.000003	ND	

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>ST</sup> ED. 2017 (AWWA APHA, WEF)

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 09:43-10:24
ANALYTICAL DATE	: 06, 08-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 2-239-ก-0025
SAMPLE CONDITION	: เหลือขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-18	STANDARD <sup>1)</sup>
pH	-	4500-H B	< 0.10	7.61	M
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0054	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 22<sup>nd</sup> ED. 2017 (AWWA-APHA-WEF)

*Khemchuda Insom*

( Miss Khemchuda Insom )

Analyst

REG. NO. 2-239-ก-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: *
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 09:43-10:24
ANALYTICAL DATE	: 06/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: *
SAMPLE CONDITION	: เหลือขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-18	STANDARD
Conductivity	μS/cm	2510 B	< 1.0	666	*
Salinity	ppt	2520 B	< 0.01	0.26	*

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 22<sup>nd</sup> ED. 2017 (AWWA-APHA-WEF)

*Khemchuda Insom*

( Miss Khemchuda Insom )

Analyst

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

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. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 06/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 09:43-10:24  
ANALYTICAL DATE : 08-12/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือจุ่ม

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-18	STANDARD <sup>U</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA, APHA, WEF)

*Jutarat Jaemruen*

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-7-0022

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-7-0004

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

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

3. <sup>U</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 06/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 09:43-10:24  
ANALYTICAL DATE : 08-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือจุ่ม

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-18	STANDARD <sup>U</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>5</sub> - C <sub>8</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>9</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>25</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2020

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-7-0001

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-7-0004

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

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

3. <sup>U</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 2-239  
SAMPLING DATE : 06/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 09:43-10:24  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-18	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : \*  
SAMPLING DATE : 06/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 09:43-10:24  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : \*  
SAMPLE CONDITION : เหลือขุ่น FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-18	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	*
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	*
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	*
Endrin ketone	mg/l	6630 B	< 0.000003	ND	*

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 2-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 15:14-15:48  
ANALYTICAL DATE : 01, 02-05/08/2025 SITE OPERATOR : Mr. Jeerawat Khotamhan  
REPORT DATE : 18/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือจุ่ม

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-19	STANDARD <sup>1)</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	7.86	1)
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0013	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-P-0005

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-P-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : -  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 01/08/2025 SAMPLING TIME : 15:14-15:48  
ANALYTICAL DATE : 01/08/2025 SITE OPERATOR : Mr. Jeerawat Khotamhan  
REPORT DATE : 18/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือจุ่ม

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-19	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	496	-
Salinity	ppt	2520 B	< 0.01	0.17	-

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

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. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 15:14-15:48  
ANALYTICAL DATE : 04-12/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 7-239-9-0025  
SAMPLE CONDITION : เหลือจุ่ม

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD <sup>1/</sup>
				MW-19	
Naphthalene	mg/l	6440 C	< 0.0005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

*Jutarat Jaemruen*

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 15:14-15:48  
ANALYTICAL DATE : 04-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 FILE CODE : 7-239-9-0025  
SAMPLE CONDITION : เหลือจุ่ม

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD <sup>1/</sup>
				MW-19	
Total Petroleum Hydrocarbons					
- TPH (C <sub>5</sub> - C <sub>16</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>8</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>32</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetatriacontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 3<sup>rd</sup> ED. 2030

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 15:14-15:48  
ANALYTICAL DATE : 04-14/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 : 7-239-9-0025  
SAMPLE CONDITION : เหลือสูงน้ำ FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-19	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

*Sudaporn S.*  
(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 7-239-9-0001

*(Mrs. Araya Tipparuk)*  
Technical Management Team

REG. NO. 7-239-9-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1396/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 01/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 02/08/2025 SAMPLING TIME : 15:14-15:48  
ANALYTICAL DATE : 04-14/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 18/08/2025 : 7-239-9-0025  
SAMPLE CONDITION : เหลือสูงน้ำ FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-19	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

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

*Sudaporn S.*  
(Miss Sudaporn Soonthorn)  
Analyst

*(Mrs. Araya Tipparuk)*  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 10:49-11:32
ANALYTICAL DATE	: 06, 08-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 2-239-0-0025
SAMPLE CONDITION	: เกลือขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-20	STANDARD <sup>1/</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	7.53	1/
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0046	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

REG. NO. 2-239-0-0005

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: *
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 10:49-11:32
ANALYTICAL DATE	: 06/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: *
SAMPLE CONDITION	: เกลือขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-20	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	1.004	-
Salinity	ppt	2520 B	< 0.01	0.43	-

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

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

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. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 10:49-11:32
ANALYTICAL DATE	: 08-12/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 2-239-0-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-20	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA, APHA, WEF)

*Jutarat Jaemruen*

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 2-239-0-0022

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 10:49-11:32
ANALYTICAL DATE	: 08-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 2-239-0-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-20	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>3</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>8</sub> - C <sub>10</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>10</sub> - C <sub>19</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2020

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-0-0001

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 06/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 10:49-11:32  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลืออ่างน้ำ FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-20	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : \*  
SAMPLING DATE : 06/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 10:49-11:32  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : \*  
SAMPLE CONDITION : เหลืออ่างน้ำ FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-20	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	*
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	*
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	*
Endrin ketone	mg/l	6630 B	< 0.000003	ND	*

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

(Mrs. Araya Tipparuk)  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 2-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 09:59-10:05  
ANALYTICAL DATE : 04, 06-11/08/2025 SITE OPERATOR : Mr. Jeerawal Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 2-239-9-0025  
SAMPLE CONDITION : เหลือจุ่ม

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-21	STANDARD <sup>U</sup>
pH		4500-H <sup>+</sup> B	< 0.10	7.33	U
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0007	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

*Khemchuda Insom*

( Miss Khemchuda Insom )

Analyst

REG. NO. 2-239-R-0005

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

Technical Management Team

REG. NO. 2-239-R-0004

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

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

3. <sup>U</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : -  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 04/08/2025 SAMPLING TIME : 09:59-10:05  
ANALYTICAL DATE : 04/08/2025 SITE OPERATOR : Mr. Jeerawal Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : -  
SAMPLE CONDITION : เหลือจุ่ม

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-21	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	368	-
Salinity	ppt	2520 B	< 0.01	0.10	-

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

*Khemchuda Insom*

( Miss Khemchuda Insom )

Analyst

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 09:59-10:05
ANALYTICAL DATE	: 08-15/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืองนุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD <sup>1)</sup>
				MW-21	
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA, APHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 09:59-10:05
ANALYTICAL DATE	: 08-15/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืองนุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD <sup>1)</sup>
				MW-21	
Total Petroleum Hydrocarbons					
- TPH (C <sub>3</sub> - C <sub>6</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>8</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	0.042	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>33</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetatriacontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 09:59-10:05  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-9-0025  
SAMPLE CONDITION : เหลืองขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-21	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudapom S.

(Miss Sudapom Soonthorn)

Analyst

REG. NO. 7-239-9-0001

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : -  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 09:59-10:05  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : -  
SAMPLE CONDITION : เหลืองขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-21	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	
Endrin ketone	mg/l	6630 B	< 0.000003	ND	

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

Sudapom S.

(Miss Sudapom Soonthorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 13:59-14:21
ANALYTICAL DATE	: 06, 08-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 2-239-0-0025
SAMPLE CONDITION	: เหลืออยู่	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-22	STANDARD <sup>1/</sup>
pH		4500-H <sup>+</sup> B	< 0.10	7.68	1/
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0048	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-0-0005

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: *
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 13:59-14:21
ANALYTICAL DATE	: 06/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: *
SAMPLE CONDITION	: เหลืออยู่	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-22	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	1,706	*
Salinity	ppt	2520 B	< 0.01	0.81	*

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

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 13:59-14:21
ANALYTICAL DATE	: 08-12/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-22	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 13:59-14:21
ANALYTICAL DATE	: 08-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-22	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>8</sub> - C <sub>16</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>8</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>32</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 06/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 13:59-14:21  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลืองขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-22	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 19<sup>th</sup> ED. 2012 (AWWA APHA WEF)

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-R-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-R-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1460/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 06/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 08/08/2025 SAMPLING TIME : 13:59-14:21  
ANALYTICAL DATE : 18-20/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลืองขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-22	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	≤ 0.04
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin ketone	mg/l	6630 B	< 0.000003	ND	≤ 0.003

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 19<sup>th</sup> ED. 2012 (AWWA APHA WEF)

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 10:29-10:48
ANALYTICAL DATE	: 04, 06-11/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025	FILE CODE	: 2-239-n-0025
SAMPLE CONDITION	: เหลือจุ่ม		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-23	STANDARD <sup>1/</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	7.44	11
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0062	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

REG. NO. 2-239-n-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-n-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 04/08/2025	SAMPLING TIME	: 10:29-10:48
ANALYTICAL DATE	: 04/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025	FILE CODE	: -
SAMPLE CONDITION	: เหลือจุ่ม		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-23	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	931	-
Salinity	ppt	2520 B	< 0.01	0.39	-

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

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 10:29-10:48  
ANALYTICAL DATE : 08-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลืองขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-23	STANDARD <sup>1)</sup>
Naphthalene	mg/l	6440 C	< 0.0005	0.00009	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA, APHA, WEF)

Jutarat Jaemrueh

(Miss Jutarat Jaemrueh)

Analyst

REG. NO. 7-239-0-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 10:29-10:48  
ANALYTICAL DATE : 08-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลืองขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-23	STANDARD <sup>1)</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>5</sub> - C <sub>8</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>9</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>17</sub> - C <sub>35</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- n-Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 10:29-10:48
ANALYTICAL DATE	: 08-16/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: 7-239-ท-0025
SAMPLE CONDITION	: เหลืออยู่	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-23	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 7-239-ท-0001

(Mrs. Araya Tipparuk)  
Technical Management Team

REG. NO. 7-239-ท-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 10:29-10:48
ANALYTICAL DATE	: 08-16/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: -
SAMPLE CONDITION	: เหลืออยู่	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-23	STANDARD
dela-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

(Mrs. Araya Tipparuk)  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 05/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 16:13-16:30
ANALYTICAL DATE	: 05, 08-15/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: 7-239-R-0025
SAMPLE CONDITION	: เหลือจุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-24	STANDARD <sup>1)</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	7.70	1)
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0038	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

REG. NO. 7-239-R-0005

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-R-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 05/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 05/08/2025	SAMPLING TIME	: 16:13-16:30
ANALYTICAL DATE	: 05/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: -
SAMPLE CONDITION	: เหลือจุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-24	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	31,330	-
Salinity	ppt	2520 B	< 0.01	18.99	-

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

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 05/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 16:13-16:30
ANALYTICAL DATE	: 08-15/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 21/08/2025		: 7-239-9-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-24	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA, APHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 05/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 16:13-16:30
ANALYTICAL DATE	: 08-15/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 21/08/2025		: 7-239-9-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-24	STANDARD <sup>1/</sup>
Total Petroleum Hydrocarbons					
- TPH (C <sub>7</sub> - C <sub>10</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>7</sub> - C <sub>10</sub> )	mg/l	3510 C / 8015 D	< 0.025	0.028	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>35</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE: US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 05/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 16:13-16:30  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khotamhan  
REPORT DATE : 21/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-24	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-R-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : -  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 16:13-16:30  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khotamhan  
REPORT DATE : 21/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-24	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 05/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 15:24-15:51
ANALYTICAL DATE	: 05, 08-15/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: 2-239-R-0025
SAMPLE CONDITION	: เหลือขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-25	STANDARD <sup>1/</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	7.40	<sup>1/</sup>
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0358	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

( Miss Khemchuda Insom )

Analyst

REG. NO. 2-239-R-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-R-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 05/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 05/08/2025	SAMPLING TIME	: 15:24-15:51
ANALYTICAL DATE	: 05/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: -
SAMPLE CONDITION	: เหลือขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-25	STANDARD
Conductivity	µS/cm	2510 B	≤ 1.0	499	-
Salinity	ppt	2520 B	< 0.01	0.17	-

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

( Miss Khemchuda Insom )

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	1423/68
SAMPLING BY	SECOT Co., Ltd.	REGISTRATION No.	7-239
SAMPLING DATE	05/08/2025	SAMPLING METHOD	Pneumatic Bladder Pump
RECEIVED DATE	06/08/2025	SAMPLING TIME	15:24-15:51
ANALYTICAL DATE	08-15/08/2025	SITE OPERATOR	Mr. Jeerawat Khothamhan
REPORT DATE	21/08/2025		7-239-9-0025
SAMPLE CONDITION	เหลือถัง	FILE CODE	225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-25	STANDARD <sup>1)</sup>
Naphthalene	mg/l	6440 C	< 0.0005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 1<sup>st</sup> ED. 2017 (AWWA-APHA-WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	1423/68
SAMPLING BY	SECOT Co., Ltd.	REGISTRATION No.	7-239
SAMPLING DATE	05/08/2025	SAMPLING METHOD	Pneumatic Bladder Pump
RECEIVED DATE	06/08/2025	SAMPLING TIME	15:24-15:51
ANALYTICAL DATE	08-15/08/2025	SITE OPERATOR	Mr. Jeerawat Khothamhan
REPORT DATE	21/08/2025		7-239-9-0025
SAMPLE CONDITION	เหลือถัง	FILE CODE	225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-25	STANDARD <sup>1)</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>3</sub> - C <sub>6</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>7</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>7</sub> - C <sub>19</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : USEPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2010

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 05/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 15:24-15:51  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลืออยู่

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-25	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0004

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 05/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 15:24-15:51  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลืออยู่

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-25	STANDARD <sup>1/</sup>
delta-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	≤ 0.04
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin ketone	mg/l	6630 B	< 0.000003	ND	≤ 0.03

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 05/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 09:11-09:25
ANALYTICAL DATE	: 05, 08-15/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-26	STANDARD <sup>1)</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	7.46	11
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0207	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> Ed. 2017 (AWWA ALPHA-WEP)

(Miss Khemchuda Insom)

Analyst

REG. NO. 7-239-R-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-R-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 05/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 05/08/2025	SAMPLING TIME	: 09:11-09:25
ANALYTICAL DATE	: 05/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: -
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-26	STANDARD
Conductivity	μS/cm	2510 B	< 1.0	495	-
Salinity	ppt	2520 B	< 0.01	0.17	-

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> Ed. 2017 (AWWA ALPHA-WEP)

(Miss Khemchuda Insom)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 05/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 09:11-09:25
ANALYTICAL DATE	: 08-15/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: 2-239-0-0025
SAMPLE CONDITION	: เหลือของขึ้น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-26	STANDARD <sup>1)</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 2-239-0-0022

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 05/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 09:11-09:25
ANALYTICAL DATE	: 08-15/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: 2-239-0-0025
SAMPLE CONDITION	: เหลือของขึ้น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-26	STANDARD <sup>1)</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>7</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>7-8</sub> - C <sub>10</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>7-16</sub> - C <sub>35</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetratriacontane					
- Pentatriacontane					

REFERENCE: US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2002

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-0-0001

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 05/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 09:11-09:25  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-9-0025  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-26	STANDARD "
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

NR

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 05/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 09:11-09:25  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-9-0025  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-26	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	*
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	*
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	*
Endrin ketone	mg/l	6630 B	< 0.000003	ND	*

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

NR

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 11:12-11:41
ANALYTICAL DATE	: 04, 06-11/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: 2-239-9-0025
SAMPLE CONDITION	: เหลือขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-27	STANDARD <sup>1/</sup>
pH		4500-H <sup>+</sup> B	< 0.10	7.70	1/
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0094	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

(Miss Khemchuda Insom)

Analyst

REG. NO. 2-239-9-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-9-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 04/08/2025	SAMPLING TIME	: 11:12-11:41
ANALYTICAL DATE	: 04/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: 2-239-9-0025
SAMPLE CONDITION	: เหลือขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-27	STANDARD
Conductivity	μS/cm	2510 B	< 1.0	862	
Salinity	ppt	2520 B	< 0.01	0.35	

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

(Miss Khemchuda Insom)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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 : cnvserv@secot.co.th

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 11:12-11:41  
ANALYTICAL DATE : 08-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-ก-0025  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-27	STANDARD <sup>u</sup>
Naphthalene	mg/l	6440 C	< 0.0005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

*Jutarat Jaemruen*

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-ก-0022

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-0004

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

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

3. <sup>u</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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 : cnvserv@secot.co.th

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 11:12-11:41  
ANALYTICAL DATE : 08-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-ก-0025  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-27	STANDARD <sup>u</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>5</sub> - C <sub>8</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>8</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>35</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : USEPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED. 2002

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-ก-0001

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-0004

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

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

3. <sup>u</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 11:12-11:41
ANALYTICAL DATE	: 08-16/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025	FILE CODE	: 225010_GW_August
SAMPLE CONDITION	: เหลืองขุ่น		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-27	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tipparuk)  
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. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 11:12-11:41
ANALYTICAL DATE	: 08-16/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025	FILE CODE	: 225010_GW_August
SAMPLE CONDITION	: เหลืองขุ่น		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-27	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

(Mrs. Araya Tipparuk)  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 14:50-15:24
ANALYTICAL DATE	: 06, 08-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 2-239-9-0025
SAMPLE CONDITION	: เหลือขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-28	STANDARD <sup>1)</sup>
pH		4500-H <sup>+</sup> B	< 0.10	8.01	U
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0066	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 22<sup>nd</sup> ED. 2017 (AWWA APHA WEF)

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

REG. NO. 2-239-R-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-R-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: *
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 14:50-15:24
ANALYTICAL DATE	: 06/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: *
SAMPLE CONDITION	: เหลือขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-28	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	834	*
Salinity	ppt	2520 B	< 0.01	0.34	*

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 22<sup>nd</sup> ED. 2017 (AWWA APHA WEF)

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 14:50-15:24
ANALYTICAL DATE	: 08-12/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 2-239-0-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-28	STANDARD <sup>1)</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA, APHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 2-239-0-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 14:50-15:24
ANALYTICAL DATE	: 08-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 2-239-0-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-28	STANDARD <sup>1)</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>2</sub> - C <sub>6</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>7</sub> - C <sub>10</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>11</sub> - C <sub>15</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE: US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 3<sup>rd</sup> ED. 2020.

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL. Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 14:50-15:24
ANALYTICAL DATE	: 18-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-28	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2017 (AWWA APHA WEP)

Sudaporn S.  
(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL. Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 14:50-15:24
ANALYTICAL DATE	: 18-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: -
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-28	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2017 (AWWA APHA WEP)

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

(Mrs. Araya Tipparuk)  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 13:39-14:23
ANALYTICAL DATE	: 04, 06-11/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025	FILE CODE	: 2-239-n-0025
SAMPLE CONDITION	: เหลืองปูน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-29	STANDARD <sup>1)</sup>
pH		4500-H <sup>+</sup> B	< 0.10	7.39	H
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0015	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

( Miss Khemchuda Insorn )

Analyst

REG. NO. 2-239-n-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-n-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 04/08/2025	SAMPLING TIME	: 13:39-14:23
ANALYTICAL DATE	: 04/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025	FILE CODE	: -
SAMPLE CONDITION	: เหลืองปูน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-29	STANDARD
Conductivity	μS/cm	2510 B	< 1.0	2,762	-
Salinity	ppt	2520 B	< 0.01	1.36	-

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

( Miss Khemchuda Insorn )

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 13:39-14:23
ANALYTICAL DATE	: 08-15/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืองจุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND	STATION	STANDARD <sup>1)</sup>
			(non-detectable)	MW-29	
Naphtalene	mg/l	6440 C	< 0.0005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA, APHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 13:39-14:23
ANALYTICAL DATE	: 08-15/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลืองจุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND	STATION	STANDARD <sup>1)</sup>
			(non-detectable)	MW-29	
Total Petroleum Hydrocarbons					
- TPH (C <sub>3</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>8</sub> - C <sub>10</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>10</sub> - C <sub>15</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- n-Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 3<sup>rd</sup> ED. 2020.

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 13:39-14:23  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือผง

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-29	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-R-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-R-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1)</sup> Notification of the Ministry of Industry, Regarding Soil and Groundwater Pollution Standards B.E.2559 (2016).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 13:39-14:23  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือผง

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-29	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	*
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	*
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	*
Endrin ketone	mg/l	6630 B	< 0.000003	ND	*

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

(Mrs. Araya Tipparuk)  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 15:56-16:24
ANALYTICAL DATE	: 06, 08-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลือจุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-30	STANDARD <sup>1)</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	7.73	1)
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0112	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

REG. NO. 7-239-0-0005

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: *
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 15:56-16:24
ANALYTICAL DATE	: 06/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: *
SAMPLE CONDITION	: เหลือจุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-30	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	522	*
Salinity	ppt	2520 B	< 0.01	0.18	*

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

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL. Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 15:56-16:24
ANALYTICAL DATE	: 08-12/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 7-239-9-0025
SAMPLE CONDITION	: เหลืองปูน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-30	STANDARD <sup>U</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>U</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL. Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 15:56-16:24
ANALYTICAL DATE	: 08-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 7-239-9-0025
SAMPLE CONDITION	: เหลืองปูน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-30	STANDARD <sup>U</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>7</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>9</sub> - C <sub>10</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>10</sub> - C <sub>15</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>U</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 15:56-16:24
ANALYTICAL DATE	: 18-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-9-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-30	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tipparuk)  
Technical Management Team

REG. NO. 7-239-9-0004

- Remark : 1. Reported analysis refers to submitted sample only.
2. This report shall not be reproduced, except in full, without official approval.
3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1460/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 15:56-16:24
ANALYTICAL DATE	: 18-20/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: -
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-30	STANDARD
dela-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

(Mrs. Araya Tipparuk)  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 2-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 14:54-15:20  
ANALYTICAL DATE : 04, 06-11/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 2-239-0-0025  
SAMPLE CONDITION : เหลือจุ่ม

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD <sup>1)</sup>
				MW-31	
pH		4500-H <sup>+</sup> B	< 0.10	7.01	M
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0041	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

( Miss Khemchuda Insorn )

Analyst

REG. NO. 2-239-0-0005

( Mrs. Araya Tipparuk )

Technical Management Team

REG. NO. 2-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. :  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 04/08/2025 SAMPLING TIME : 14:54-15:20  
ANALYTICAL DATE : 04/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025  
SAMPLE CONDITION : เหลือจุ่ม FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD
				MW-31	
Conductivity	μS/cm	2510 B	< 1.0	1.325	-
Salinity	ppt	2520 B	< 0.01	0.60	-

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

( Miss Khemchuda Insorn )

Analyst

( Mrs. Araya Tipparuk )

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 14:54-15:20  
ANALYTICAL DATE : 08-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือของขึ้น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-31	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.0005	0.00010	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA, APHA, WEF)

Jutarat Jaemuen  
(Miss Jutarat Jaemuen)

Analyst

REG. NO. 7-239-0-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry. B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 14:54-15:20  
ANALYTICAL DATE : 08-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือของขึ้น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-31	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>7</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>8</sub> - C <sub>10</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>33</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2008

Sudaporn S.  
(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry. B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 14:54-15:20
ANALYTICAL DATE	: 08-16/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 21/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลือขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-31	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 14:54-15:20
ANALYTICAL DATE	: 08-16/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 21/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลือขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-31	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	≤ 0.04
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	≤ 0.003
Endrin ketone	mg/l	6630 B	< 0.000003	ND	≤ 0.03

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

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 05/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 14:18-14:55
ANALYTICAL DATE	: 05, 08-15/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: 2-239-0-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-32	STANDARD <sup>1)</sup>
pH		4500-H <sup>+</sup> B	< 0.10	7.84	//
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0080	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

( Miss Khemchuda Insorn )

Analyst

REG. NO. 2-239-0-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 05/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 05/08/2025	SAMPLING TIME	: 14:18-14:55
ANALYTICAL DATE	: 05/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: 2-239-0-0025
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-32	STANDARD <sup>1)</sup>
Conductivity	μS/cm	2510 B	< 1.0	751	*
Salinity	ppt	2520 B	< 0.01	0.30	*

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

( Miss Khemchuda Insorn )

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 05/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 14:18-14:55
ANALYTICAL DATE	: 08-15/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025	FILE CODE	: 225010_GW_August
SAMPLE CONDITION	: เหลืองปูน		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-32	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA-APHA-WEF)

*Jutarat Jaemruen*

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-ก-0022

*(Mrs. Araya Tipparuk)*

Technical Management Team

REG. NO. 7-239-ก-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 05/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 14:18-14:55
ANALYTICAL DATE	: 08-15/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025	FILE CODE	: 225010_GW_August
SAMPLE CONDITION	: เหลืองปูน		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-32	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>5</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>10</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>31</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetatriacontane					
- Pentatriacontane					

REFERENCE: US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2000

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-ก-0001

*(Mrs. Araya Tipparuk)*

Technical Management Team

REG. NO. 7-239-ก-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 05/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 14:18-14:55  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-32	STANDARD "
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

- 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 Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 05/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 14:18-14:55  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-32	STANDARD "
delta-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	≤ 0.04
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin ketone	mg/l	6630 B	< 0.000003	ND	≤ 0.03

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)  
Analyst

(Mrs. Araya Tipparuk)  
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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 05/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 10:54-11:38
ANALYTICAL DATE	: 05, 08-15/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: เหลือจุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-33	STANDARD <sup>u</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	7.70	u
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0062	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

*Khemchuda Insom*

( Miss Khemchuda Insom )

Analyst

REG. NO. 7-239-R-0005

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

Technical Management Team

REG. NO. 7-239-R-0004

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

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

3. <sup>u</sup> Notification of the Ministry of Industry, B.E 2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 05/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 05/08/2025	SAMPLING TIME	: 10:54-11:38
ANALYTICAL DATE	: 05/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: -
SAMPLE CONDITION	: เหลือจุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-33	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	491	-
Salinity	ppt	2520 B	< 0.01	0.16	-

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

*Khemchuda Insom*

( Miss Khemchuda Insom )

Analyst

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 05/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 10:54-11:38  
ANALYTICAL DATE : 08-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-9-0025  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-33	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.0005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

Jutarat Joermuen

(Miss Jutarat Jaermuen)

Analyst

REG. NO. 7-239-9-0022

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 05/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 10:54-11:38  
ANALYTICAL DATE : 08-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-9-0025  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-33	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>5</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>8</sub> - C <sub>10</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>10</sub> - C <sub>35</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : USE EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 05/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 10:54-11:38  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือของขึ้น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-33	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

*NR*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 05/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 10:54-11:38  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : เหลือของขึ้น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-33	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	≤ 0.01
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	≤ 0.003
Endrin ketone	mg/l	6630 B	< 0.000003	ND	≤ 0.03

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

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

*NR*

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 2-239  
SAMPLING DATE : 05/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 09:44-10:25  
ANALYTICAL DATE : 05, 08-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 2-239-R-0025  
SAMPLE CONDITION : เหลือจุ่ม

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-34	STANDARD <sup>1)</sup>
pH		4500-H <sup>+</sup> B	< 0.10	7.55	//
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0060	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

REG. NO. 2-239-R-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-R-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. :  
SAMPLING DATE : 05/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 05/08/2025 SAMPLING TIME : 09:44-10:25  
ANALYTICAL DATE : 05/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE :  
SAMPLE CONDITION : เหลือจุ่ม

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-34	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	489	-
Salinity	ppt	2520 B	< 0.01	0.16	-

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

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 09:44-10:25  
ANALYTICAL DATE : 08-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือของขึ้น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-34	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA-APHA-WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)  
Analyst

REG. NO. 7-239-0-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 09:44-10:25  
ANALYTICAL DATE : 08-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือของขึ้น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-34	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>5</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>9</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>19</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 3<sup>rd</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 09:44-10:25  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khotamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือจุน FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-34	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. :  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 09:44-10:25  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khotamhan  
REPORT DATE : 21/08/2025 FILE CODE :  
SAMPLE CONDITION : เหลือจุน FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-34	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	*
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	*
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	*
Endrin ketone	mg/l	6630 B	< 0.000003	ND	*

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 06/08/2025	SAMPLING TIME	: 15:46-14:23
ANALYTICAL DATE	: 04, 06-11/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: 2-239-9-0025
SAMPLE CONDITION	: เกลือขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-35	STANDARD <sup>1)</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	7.51	1)
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0055	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

( Miss Khemchuda Insorn )

Analyst

REG. NO. 2-239-9-0005

( Mrs. Araya Tipparuk )

Technical Management Team

REG. NO. 2-239-9-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1423/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 04/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 04/08/2025	SAMPLING TIME	: 15:46-14:23
ANALYTICAL DATE	: 04/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 21/08/2025		: -
SAMPLE CONDITION	: เกลือขุ่น	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-35	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	337	-
Salinity	ppt	2520 B	< 0.01	0.08	-

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

( Miss Khemchuda Insorn )

Analyst

( Mrs. Araya Tipparuk )

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 15:46-14:23  
ANALYTICAL DATE : 08-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือของขึ้น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-35	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.0005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> Ed. 2017 (AWWA, APHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

AR

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 15:46-14:23  
ANALYTICAL DATE : 08-15/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือของขึ้น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-35	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>5</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>10</sub> - C <sub>14</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>15</sub> - C <sub>33</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> Ed. 2020.

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

AR

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 15:46-14:23  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-35	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1423/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. :  
SAMPLING DATE : 04/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 06/08/2025 SAMPLING TIME : 15:46-14:23  
ANALYTICAL DATE : 08-16/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 21/08/2025 FILE CODE :  
SAMPLE CONDITION : เหลือขุ่น

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-35	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 11:31-11:55
ANALYTICAL DATE	: 08, 11-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025	FILE CODE	: 2-239-ก-0025
SAMPLE CONDITION	: สัมบูรณ์	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-36	STANDARD <sup>1)</sup>
pH		4500-H <sup>+</sup> B	< 0.10	6.78	U
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0192	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

*Khemchuda Insom*

(Miss Khemchuda Insom)

Analyst

REG. NO. 2-239-ก-0005

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 11:31-11:55
ANALYTICAL DATE	: 08/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025	FILE CODE	: 2-239-ก-0025
SAMPLE CONDITION	: สัมบูรณ์	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-36	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	2.578	+
Salinity	ppt	2520 B	< 0.01	1.3	+

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

*Khemchuda Insom*

(Miss Khemchuda Insom)

Analyst

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 11:31-11:55
ANALYTICAL DATE	: 15-19/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: สุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-36	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA, APHA, WEF)

Jutarat Jaemuen

(Miss Jutarat Jaemuen)

Analyst

REG. NO. 7-239-0-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 11:31-11:55
ANALYTICAL DATE	: 18-23/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: สุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-36	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>5</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>10</sub> - C <sub>19</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>20</sub> - C <sub>35</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triscontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE: US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 3<sup>rd</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1483/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 08/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 11/08/2025 SAMPLING TIME : 11:31-11:55  
ANALYTICAL DATE : 21-22/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025  
SAMPLE CONDITION : เก็บน้ำ FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-36	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1483/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 08/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 11/08/2025 SAMPLING TIME : 11:31-11:55  
ANALYTICAL DATE : 21-22/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025  
SAMPLE CONDITION : เก็บน้ำ FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-36	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 14:03-14:30
ANALYTICAL DATE	: 08, 11-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 2-239-ก-0025
SAMPLE CONDITION	: ต้นทุน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-37	STANDARD <sup>1)</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	7.06	1)
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0224	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

(Miss Khemchuda Insoorn)

Analyst

REG. NO. 2-239-ก-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 14:03-14:30
ANALYTICAL DATE	: 08/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: -
SAMPLE CONDITION	: ต้นทุน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-37	STANDARD
Conductivity	μS/cm	2510 B	< 1.0	2,414	-
Salinity	ppt	2520 B	< 0.01	1.2	-

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

(Miss Khemchuda Insoorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1483/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 08/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 11/08/2025 SAMPLING TIME : 14:03-14:30  
ANALYTICAL DATE : 15-19/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 : 7-239-n-0025  
SAMPLE CONDITION : สัมปทุน FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND	STATION	STANDARD <sup>1)</sup>
			(non-detectable)	MW-37	
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-n-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-n-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1483/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 08/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 11/08/2025 SAMPLING TIME : 14:03-14:30  
ANALYTICAL DATE : 18-23/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 : 7-239-n-0025  
SAMPLE CONDITION : สัมปทุน FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD <sup>1)</sup>
		METHODS	(non-detectable)	MW-37	
Total Petroleum Hydrocarbons					
- TPH (C <sub>3</sub> - C <sub>6</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>7</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>33</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetatriacontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2000

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-n-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-n-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 14:03-14:30
ANALYTICAL DATE	: 21-22/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 2-239-0-0025
SAMPLE CONDITION	: พื้นปูน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-37	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-0004

- Remark : 1. Reported analysis refers to submitted sample only.
2. This report shall not be reproduced, except in full, without official approval.
3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 14:03-14:30
ANALYTICAL DATE	: 21-22/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: -
SAMPLE CONDITION	: พื้นปูน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-37	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	-
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	-
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	-
Endrin ketone	mg/l	6630 B	< 0.000003	ND	-

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 10:35-10:58
ANALYTICAL DATE	: 08, 11-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: สุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-38	STANDARD <sup>1)</sup>
pH		4500-H <sup>+</sup> B	< 0.10	6.83	#
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0548	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	< 0.01	≤ 5.0

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

*Khemchuda Insom*

( Miss Khemchuda Insom )

Analyst

REG. NO. 7-239-0-0005

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 10:35-10:58
ANALYTICAL DATE	: 08/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: สุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-38	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	1.886	-
Salinity	ppt	2520 B	< 0.01	0.91	-

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

*Khemchuda Insom*

( Miss Khemchuda Insom )

Analyst

*Araya Tipparuk*

( Mrs. Araya Tipparuk )

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 10:35-10:58
ANALYTICAL DATE	: 15-19/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: สัมป่วน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-38	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016): Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 10:35-10:58
ANALYTICAL DATE	: 18-23/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: สัมป่วน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-38	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>3</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>8</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>35</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Tricosane					
- n-Dotriacontane					
- n-Tetracontane					
- n-Pentatriacontane					

REFERENCE: US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016): Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1483/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 08/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 11/08/2025 SAMPLING TIME : 10:35-10:58  
ANALYTICAL DATE : 21-22/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : สุ่ม  
FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-38	STANDARD <sup>u</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>u</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1483/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 08/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 11/08/2025 SAMPLING TIME : 10:35-10:58  
ANALYTICAL DATE : 21-22/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : สุ่ม  
FILE CODE : 225010\_GW\_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-38	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	≤ 0.04
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin ketone	mg/l	6630 B	< 0.000003	ND	≤ 0.03

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

Sudaporn S.  
(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 15:02-15:38
ANALYTICAL DATE	: 08, 11-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025	FILE CODE	: 2-239-9-0025
SAMPLE CONDITION	: ต้นปูน		: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-39	STANDARD <sup>1)</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	6.93	H
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0027	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

( Miss Khemchuda Insorn )

Analyst

REG. NO. 2-239-9-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-9-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 15:02-15:38
ANALYTICAL DATE	: 08/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		
SAMPLE CONDITION	: ต้นปูน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-39	STANDARD
Conductivity	μS/cm	2510 B	< 1.0	3,802	*
Salinity	ppt	2520 B	< 0.01	1.9	*

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

( Miss Khemchuda Insorn )

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1483/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 08/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 11/08/2025 SAMPLING TIME : 15:02-15:38  
ANALYTICAL DATE : 15-19/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : ทั่วไป

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-39	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA, APHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-9-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1483/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 08/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 11/08/2025 SAMPLING TIME : 15:02-15:38  
ANALYTICAL DATE : 18-23/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 225010\_GW\_August  
SAMPLE CONDITION : ทั่วไป

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-39	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>3</sub> - C <sub>6</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>7</sub> - C <sub>10</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>11</sub> - C <sub>15</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 3<sup>rd</sup> ED. 2000

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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 : cnvserv@secot.co.th

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 15:02-15:38
ANALYTICAL DATE	: 21-22/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-9-0025
SAMPLE CONDITION	: สุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-39	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-0004

- Remark : 1. Reported analysis refers to submitted sample only.
2. This report shall not be reproduced, except in full, without official approval.
3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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 : cnvserv@secot.co.th

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 15:02-15:38
ANALYTICAL DATE	: 21-22/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-9-0025
SAMPLE CONDITION	: สุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-39	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	*
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	*
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	*
Endrin ketone	mg/l	6630 B	< 0.000003	ND	*

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 16:18-16:45
ANALYTICAL DATE	: 08, 11-18/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-8-0025
SAMPLE CONDITION	: ต้นทุน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-40	STANDARD"
pH	-	4500-H <sup>+</sup> B	< 0.10	6.87	"
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0141	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	< 0.01	≤ 5.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 22<sup>nd</sup> ED. 2017 (AWWA, APHA, WEF)

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-8-0005

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-8-0004

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 Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 08/08/2025	SAMPLING TIME	: 16:18-16:45
ANALYTICAL DATE	: 08/08/2025	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/08/2025		: 7-239-8-0025
SAMPLE CONDITION	: ต้นทุน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-40	STANDARD
Conductivity	µS/cm	2510 B	< 1.0	1.411	"
Salinity	ppt	2520 B	< 0.01	0.76	"

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 22<sup>nd</sup> ED. 2017 (AWWA, APHA, WEF)

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL. Branch 6 (Refinery)	REQUEST SERVICE No	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 16:18-16:45
ANALYTICAL DATE	: 15-19/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 2-239-9-0025
SAMPLE CONDITION	: ซึมผ่าน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-40	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 2-239-9-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-9-0004

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL. Branch 6 (Refinery)	REQUEST SERVICE No	: 1483/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 08/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 11/08/2025	SAMPLING TIME	: 16:18-16:45
ANALYTICAL DATE	: 18-23/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 2-239-9-0025
SAMPLE CONDITION	: ซึมผ่าน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-40	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>7</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>10</sub> - C <sub>16</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>33</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE: US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 3<sup>rd</sup> ED. 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-9-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-9-0004

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1483/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 08/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 11/08/2025 SAMPLING TIME : 16:18-16:45  
ANALYTICAL DATE : 21-22/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : ฝนตก

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-40	STANDARD <sup>1)</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1483/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 08/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 11/08/2025 SAMPLING TIME : 16:18-16:45  
ANALYTICAL DATE : 21-22/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : ฝนตก

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-40	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	*
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	*
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	*
Endrin ketone	mg/l	6630 B	< 0.000003	ND	*

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	1501/68
SAMPLING BY	SECOT Co., Ltd.	REGISTRATION No.	7-239
SAMPLING DATE	13/08/2025	SAMPLING METHOD	Pneumatic Bladder Pump
RECEIVED DATE	15/08/2025	SAMPLING TIME	15:41-15:56
ANALYTICAL DATE	13,15-22/08/2025	SITE OPERATOR	Mr. Jeerawat Khothamhan
REPORT DATE	26/08/2025		7-239-ก-0025
SAMPLE CONDITION	ซึมปน	FILE CODE	225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-41	STANDARD <sup>1)</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	7.16	11
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0123	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

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

( Miss Khemchuda Insorn )

Analyst

REG. NO. 7-239-ก-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	1501/68
SAMPLING BY	SECOT Co., Ltd.	REGISTRATION No.	-
SAMPLING DATE	13/08/2025	SAMPLING METHOD	Pneumatic Bladder Pump
RECEIVED DATE	13/08/2025	SAMPLING TIME	15:41-15:56
ANALYTICAL DATE	13/08/2025	SITE OPERATOR	Mr. Jeerawat Khothamhan
REPORT DATE	26/08/2025		-
SAMPLE CONDITION	ซึมปน	FILE CODE	225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-41	STANDARD
Conductivity	μS/cm	2510 B	< 1.0	2.718	-
Salinity	ppt	2520 B	< 0.01	1.5	-

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

( Miss Khemchuda Insorn )

Analyst

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1501/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 13/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 15/08/2025 SAMPLING TIME : 15:41-15:56  
ANALYTICAL DATE : 15-19/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : สัมปวัน

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-41	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.0005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED. 2017 (AWWA APHA WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-R-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL. Branch 6 (Refinery) REQUEST SERVICE No : 1501/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 13/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 15/08/2025 SAMPLING TIME : 15:41-15:56  
ANALYTICAL DATE : 18-23/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : สัมปวัน

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-41	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>2</sub> - C <sub>6</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>8</sub> - C <sub>10</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>19</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- n-Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1<sup>st</sup> ED. 2000

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-R-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1501/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 13/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 15/08/2025 SAMPLING TIME : 15:41-15:56  
ANALYTICAL DATE : 21-22/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-ท-0025  
SAMPLE CONDITION : สัมบูรณ์

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-41	STANDARD <sup>1/</sup>
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-ท-0001

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ท-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1501/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 13/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 15/08/2025 SAMPLING TIME : 15:41-15:56  
ANALYTICAL DATE : 21-22/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-ท-0025  
SAMPLE CONDITION : สัมบูรณ์

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-41	STANDARD
delta-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	≤ 0.01
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	≤ 0.003
Endrin ketone	mg/l	6630 B	< 0.000003	ND	≤ 0.03

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

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

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. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 15/08/2025	SAMPLING TIME	: 14:58-15:15
ANALYTICAL DATE	: 13,15-22/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 2-239-B-0025
SAMPLE CONDITION	: สุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-42	STANDARD <sup>1)</sup>
pH	-	4500-H <sup>+</sup> B	< 0.10	7.52	1)
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0218	≤ 0.1
Cadmium (Cd)	mg/l	3120 B	< 0.001	ND	≤ 2.0
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 4.0
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	≤ 5.0

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2017 (AWWA ALPHA-WEP)

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

REG. NO. 2-239-B-0005

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-B-0004

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 2-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/08/2025	SAMPLING TIME	: 14:58-15:15
ANALYTICAL DATE	: 13/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 2-239-B-0025
SAMPLE CONDITION	: สุ่ม	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-42	STANDARD
Conductivity	μS/cm	2510 B	< 1.0	24,890	-
Salinity	ppt	2520 B	< 0.01	16.7	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21<sup>st</sup> ED. 2017 (AWWA ALPHA-WEP)

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

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.

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 15/08/2025	SAMPLING TIME	: 14:58-15:15
ANALYTICAL DATE	: 15-19/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: สัมป่วน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-42	STANDARD <sup>1/</sup>
Naphthalene	mg/l	6440 C	< 0.00005	ND	≤ 48
Benzene	mg/l	6200 B	< 0.0002	ND	≤ 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	≤ 2.0
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 21<sup>st</sup> ED., 2017 (AWWA, APHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-0-0022

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No	: 1501/68
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: 7-239
SAMPLING DATE	: 13/08/2025	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 15/08/2025	SAMPLING TIME	: 14:58-15:15
ANALYTICAL DATE	: 18-23/08/2025	SITE OPERATOR	: Mr. Jeerawat Khotamhan
REPORT DATE	: 26/08/2025		: 7-239-0-0025
SAMPLE CONDITION	: สัมป่วน	FILE CODE	: 225010_GW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-42	STANDARD <sup>1/</sup>
<b>Total Petroleum Hydrocarbons</b>					
- TPH (C <sub>5</sub> - C <sub>9</sub> )	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>8</sub> - C <sub>14</sub> )	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>16</sub> - C <sub>25</sub> )	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020.

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1501/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 13/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 15/08/2025 SAMPLING TIME : 14:58-15:15  
ANALYTICAL DATE : 21-22/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : สัมปวัน

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-42	STANDARD "
alpha-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.01
gamma-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.04
Heptachlor	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Aldrin	mg/l	6630 B	< 0.000001	ND	≤ 0.003
beta-BHC	mg/l	6630 B	< 0.000001	ND	≤ 0.03
Heptachlor epoxide	mg/l	6630 B	< 0.000001	ND	≤ 0.01
o,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Endosulfan I	mg/l	6630 B	< 0.000003	ND	≤ 14
gamma-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
alpha-Chlordane	mg/l	6630 B	< 0.000003	ND	≤ 0.04
p,p'-DDE	mg/l	6630 B	< 0.000003	ND	≤ 0.1
Dieldrin	mg/l	6630 B	< 0.000003	ND	≤ 0.003
o,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endrin	mg/l	6630 B	< 0.000003	ND	≤ 1.0
o,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1
p,p'-DDD	mg/l	6630 B	< 0.000003	ND	≤ 0.2
Endosulfan II	mg/l	6630 B	< 0.000003	ND	≤ 14
p,p'-DDT	mg/l	6630 B	< 0.000003	ND	≤ 0.1

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

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-0-0004

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 Ministry of Industry, B.E.2559 (2016) : Criteria on contamination in soil and groundwater, the examination of soil and groundwater quality, information including making the report of the result of soil and groundwater quality examination.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**GROUND WATER ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 1501/68  
SAMPLING BY : SECOT Co., Ltd. REGISTRATION No. : 7-239  
SAMPLING DATE : 13/08/2025 SAMPLING METHOD : Pneumatic Bladder Pump  
RECEIVED DATE : 15/08/2025 SAMPLING TIME : 14:58-15:15  
ANALYTICAL DATE : 21-22/08/2025 SITE OPERATOR : Mr. Jeerawat Khothamhan  
REPORT DATE : 26/08/2025 FILE CODE : 7-239-0-0025  
SAMPLE CONDITION : สัมปวัน

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-42	STANDARD "
delta-BHC	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin aldehyde	mg/l	6630 B	< 0.000001	ND	≤ 0.04
Endosulfan Sulfate	mg/l	6630 B	< 0.000003	ND	≤ 0.01
Endrin ketone	mg/l	6630 B	< 0.000003	ND	≤ 0.003

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

*Sudaporn S.*

(Miss Sudaporn Soonthorn)

Analyst

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

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. - Not available.

## คุณภาพดิน

---



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

239 ถนนวิภาวดีรังสิต 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

**SOIL SAMPLES ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 0663/66  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Hand Auger  
SAMPLING DATE : 28/04/2023 SAMPLING TIME : 11:30-11:50  
RECEIVED DATE : 02/05/2023 ANALYTICAL DATE : 02-05/05/2023  
REPORT DATE : 15/05/2023 SITE OPERATOR : Mr. Aniwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 223010\_Soil\_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD <sup>1)</sup>
				MW 1	
pH	-	4500-H B	-	8.93	-
Conductivity	dS/m	EC25 (1:5) / Electrical Conductivity	-	0.075	-
Salinity	ppt	EC25 (1:5) / Electrical Conductivity	-	0.0	-
Arsenic (As)	mg/kg	3050 B/6010 D	< 2.00	11.84	≤ 27
Cadmium (Cd)	mg/kg	3050 B/6010 D	< 1.00	ND	≤ 810
Lead (Pb)	mg/kg	3050 B/6010 D	< 3.00	19.23	≤ 750
Mercury (Hg)	mg/kg	7471B	< 0.05	ND	≤ 610
Nickel (Ni)	mg/kg	3050 B/6010 D	< 1.00	7.40	≤ 41,000

REFERENCE : US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 2<sup>nd</sup> ED., 2020

(Miss Khemchuda Inorn)  
Analyst

REG. NO. 7-239-N-5976

(Mrs. Araya Tipparuk)  
Technical Management Team

REG. NO. 7-239-N-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).
  4. Reference method : Operation Manual Chemical Analysis in Soil, Land Development Department.
  5. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

239 ถนนวิภาวดีรังสิต 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

**SOIL SAMPLES ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 0663/66  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Hand Auger  
SAMPLING DATE : 28/04/2023 SAMPLING TIME : 11:30-11:50  
RECEIVED DATE : 02/05/2023 ANALYTICAL DATE : 03-06, 08/05/2023  
REPORT DATE : 15/05/2023 SITE OPERATOR : Mr. Aniwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 223010\_Soil\_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD <sup>1</sup>
				MW 1	
Naphthalene	mg/kg	3540 C / 8270 E	< 0.005	ND	≤ 1,000
Benzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 15
Ethylbenzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 230
Toluene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 520
m-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 210
o-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 210
p-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 210
Total Xylenes	mg/kg	5035 A / 8260 D	< 0.00075	ND	≤ 210

REFERENCE : US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 2<sup>nd</sup> ED., 2020

(Miss Jutarat Jaemruen)  
Analyst

REG. NO. 7-239-N-5827

(Mrs. Araya Tipparuk)  
Technical Management Team

REG. NO. 7-239-N-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.:	: 0663/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 28/04/2023	SAMPLING TIME	: 11:30-11:50
RECEIVED DATE	: 02/05/2023	ANALYTICAL DATE	: 05, 09-11/05/2023
REPORT DATE	: 15/05/2023	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 223010_Soil_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW 1	STANDARD <sup>1/</sup>
Total Petroleum Hydrocarbon					
- TPH (C <sub>7</sub> -C <sub>8</sub> )	mg/kg	5035 A / 8260 D	< 0.003	ND	≤ 25
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>9</sub> -C <sub>16</sub> )	mg/kg	3540 C / 8015 D	< 0.25	ND	≤ 25
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>17</sub> -C <sub>33</sub> )	mg/kg	3540 C / 8015 D	< 1.85	ND	≤ 8
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetraatriacontane					
- Pentatriacontane					

REFERENCE : US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-0-0001

NT

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-5863

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.:	: 0663/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 28/04/2023	SAMPLING TIME	: 11:30-11:50
RECEIVED DATE	: 02/05/2023	ANALYTICAL DATE	: 08-09/05/2023
REPORT DATE	: 15/05/2023	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 223010_Soil_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW 1	STANDARD <sup>1/</sup>
alpha-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.3
gamma-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 29
Heptachlor	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 5.5
Aldrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.1
beta-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.9
delta-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	-
Heptachlor epoxide	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 2.7
o,p'-DDE	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.001
Endosulfan I	mg/kg	3550 C / 8081 B	< 0.0002	ND	-
gamma-Chlordane	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 110
alpha-Chlordane	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 110
p,p'-DDE	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.001
Dieldrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 1.5
o,p'-DDD	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 7
Endrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 25
o,p'-DDT	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 120
p,p'-DDD	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 7
Endosulfan II	mg/kg	3550 C / 8081 B	< 0.0002	ND	-
p,p'-DDT	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 120
Endrin aldehyde	mg/kg	3550 C / 8081 B	< 0.0002	ND	-
Endosulfan sulfate	mg/kg	3550 C / 8081 B	< 0.0002	ND	-
Endrin ketone	mg/kg	3550 C / 8081 B	< 0.0002	ND	-

REFERENCE : US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-0-0001

NT

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-0-5863

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

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

3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).

4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิมลทองประไพ 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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL., Branch 6 (Refinery) REQUEST SERVICE No. : 0676/66  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Hand Auger  
SAMPLING DATE : 03/05/2023 SAMPLING TIME : 15:35-15:50  
RECEIVED DATE : 04/05/2023 ANALYTICAL DATE : 04-05/05/2023  
REPORT DATE : 15/05/2023 SITE OPERATOR : Mr. Aniwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 223010\_Soil\_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD <sup>u</sup>
				MW 3	
pH	-	4500-H B	-	8.28	-
Conductivity	dS/m	EC25 (1:5) / Electrical Conductivity	-	0.038	-
Salinity	ppt	EC25 (1:5) / Electrical Conductivity	-	0.0	-
Arsenic (As)	mg/kg	3050 B/6010 D	< 2.00	ND	≤ 27
Cadmium (Cd)	mg/kg	3050 B/6010 D	< 1.00	ND	≤ 810
Lead (Pb)	mg/kg	3050 B/6010 D	< 3.00	7.38	≤ 750
Mercury (Hg)	mg/kg	7471B	< 0.05	ND	≤ 610
Nickel (Ni)	mg/kg	3050 B/6010 D	< 1.00	2.46	≤ 41,000

REFERENCE: US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020

*Khemchuda Insorn*

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-P-5976

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-P-5863

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>u</sup> Notification of the Ministry of Industry, B.E.2559 (2016).
  4. Reference method : Operation Manual Chemical Analysis in Soil, Land Development Department.
  5. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิมลทองประไพ 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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL., Branch 6 (Refinery) REQUEST SERVICE No. : 0676/66  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Hand Auger  
SAMPLING DATE : 03/05/2023 SAMPLING TIME : 15:35-15:50  
RECEIVED DATE : 04/05/2023 ANALYTICAL DATE : 05-06, 08/05/2023  
REPORT DATE : 15/05/2023 SITE OPERATOR : Mr. Aniwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 223010\_Soil\_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD <sup>u</sup>
				MW 3	
Naphthalene	mg/kg	3540 C / 8270 E	< 0.005	ND	≤ 1,000
Benzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 15
Ethylbenzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 230
Toluene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 520
m-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 210
o-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 210
p-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 210
Total Xylenes	mg/kg	5035 A / 8260 D	< 0.00075	ND	≤ 210

REFERENCE: US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020

*Jutarat Jaemruen*

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 7-239-P-5827

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-P-5863

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>u</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**SOIL SAMPLES ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 0676/66  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Hand Auger  
SAMPLING DATE : 03/05/2023 SAMPLING TIME : 15:35-15:50  
RECEIVED DATE : 04/05/2023 ANALYTICAL DATE : 05-09-11/05/2023  
REPORT DATE : 15/05/2023 SITE OPERATOR : Mr. Aniwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 223010\_Soil\_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW 3	STANDARD <sup>1/</sup>
Total Petroleum Hydrocarbon					
- TPH (C <sub>5</sub> - C <sub>9</sub> )	mg/kg	5035 A / 8260 D	< 0.003	ND	≤ 25
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>10</sub> - C <sub>19</sub> )	mg/kg	3540 C / 8015 D	≤ 0.25	ND	≤ 25
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>20</sub> - C <sub>25</sub> )	mg/kg	3540 C / 8015 D	≤ 1.85	6.56	≤ 8
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE: US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED., 2020

*Sudaporn Soonthorn*

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tippuruk)

Technical Management Team

REG. NO. 7-239-n-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**SOIL SAMPLES ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 0676/66  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Hand Auger  
SAMPLING DATE : 03/05/2023 SAMPLING TIME : 15:35-15:50  
RECEIVED DATE : 04/05/2023 ANALYTICAL DATE : 08-09/05/2023  
REPORT DATE : 15/05/2023 SITE OPERATOR : Mr. Aniwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 223010\_Soil\_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW 3	STANDARD <sup>1/</sup>
alpha-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.3
gamma-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 29
Heptachlor	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 5.5
Aldrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.1
beta-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.9
delta-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	-
Heptachlor epoxide	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 2.7
o,p'-DDE	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.001
Endosulfan I	mg/kg	3550 C / 8081 B	< 0.0002	ND	-
gamma-Chlordane	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 110
alpha-Chlordane	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 110
p,p'-DDE	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.001
Dieldrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 1.5
o,p'-DDD	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 7
Endrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 25
o,p'-DDT	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 120
p,p'-DDD	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 7
Endosulfan II	mg/kg	3550 C / 8081 B	< 0.0002	ND	-
p,p'-DDT	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 120
Endrin aldehyde	mg/kg	3550 C / 8081 B	< 0.0002	ND	-
Endosulfan sulfate	mg/kg	3550 C / 8081 B	< 0.0002	ND	-
Endrin ketone	mg/kg	3550 C / 8081 B	< 0.0002	ND	-

REFERENCE: US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED., 2020

*Sudaporn Soonthorn*

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tippuruk)

Technical Management Team

REG. NO. 7-239-n-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).
  4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

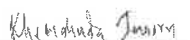
239 ถนนวิภาวดีรังสิต แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND  
TEL. (662) 959-3600 FAX (662) 959-3535 Website: secot.co.th E-mail: envserv@secot.co.th

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 0645/66  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Hand Auger  
SAMPLING DATE : 26-27/04/2023 SAMPLING TIME : 11:37-11:50, 14:55-15:25  
RECEIVED DATE : 28/04/2023 ANALYTICAL DATE : 28/04/2023-05/05/2023  
REPORT DATE : 15/05/2023 SITE OPERATOR : Mr. Aniwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 223010\_Soil\_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD <sup>1)</sup>
				MW 9	MW 32	
pH	-	4500-II <sup>2)</sup>	-	7.77	8.44	-
Conductivity	dS/m	EC25 (1:5) / Electrical Conductivity	-	0.022	0.024	-
Salinity	ppt	EC25 (1:5) / Electrical Conductivity	-	0.0	0.0	-
Arsenic (As)	mg/kg	3050 B/6010 D	< 2.00	19.87	ND	≤ 27
Cadmium (Cd)	mg/kg	3050 B/6010 D	< 1.00	ND	ND	≤ 810
Lead (Pb)	mg/kg	3050 B/6010 D	< 3.00	7.20	4.30	≤ 750
Mercury (Hg)	mg/kg	7471B	< 0.05	0.16	0.23	≤ 610
Nickel (Ni)	mg/kg	3050 B/6010 D	< 1.00	5.48	1.55	≤ 41,000

REFERENCE - US EPA SW 546 TEST METHODS FOR EVALUATING WATER AND SOIL WASTE, 3<sup>rd</sup> ED., 2020



(Miss Kienchuda Insom)  
Analyst

REG. NO. 7-239-P-5976



(Mrs. Arayu Tipparuk)  
Technical Management Team

REG. NO. 7-239-P-5863

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).
  4. Reference method : Operation Manual Chemical Analysis in Soil, Land Development Department.
  5. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 0645/66  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Hand Auger  
SAMPLING DATE : 26-27/04/2023 SAMPLING TIME : 11:37-11:50, 14:55-15:25  
RECEIVED DATE : 28/04/2023 ANALYTICAL DATE : 03-06, 08/05/2023  
REPORT DATE : 15/05/2023 SITE OPERATOR : Mr. Aniwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 223010\_Soil\_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD <sup>1)</sup>
				MW 9	MW 32	
Naphthalene	mg/kg	3540 C / 8270 E	< 0.005	ND	ND	≤ 1,000
Benzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 15
Ethylbenzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 230
Toluene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 320
m-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 210
o-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 210
p-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 210
Total Xylenes	mg/kg	5035 A / 8260 D	< 0.00075	ND	ND	≤ 210

REFERENCE - US EPA SW 546 TEST METHODS FOR EVALUATING WATER AND SOIL WASTE, 3<sup>rd</sup> ED., 2020



(Miss Jutarat Jaemruen)  
Analyst

REG. NO. 7-239-P-5827



(Mrs. Arayu Tipparuk)  
Technical Management Team

REG. NO. 7-239-P-5863

- Remark :
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).
  4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิมลจรัสประปา 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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No : 0645/66  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Hand Auger  
SAMPLING DATE : 26-27/04/2023 SAMPLING TIME : 11:37-11:50, 14:55-15:25  
RECEIVED DATE : 28/04/2023 ANALYTICAL DATE : 05, 09-11/05/2023  
REPORT DATE : 15/05/2023 SITE OPERATOR : Mr. Aniwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 223010\_Soil\_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD <sup>1/</sup>
				MW 9	MW 32	
Total Petroleum Hydrocarbon						
- TPH (C <sub>1</sub> - C <sub>8</sub> )	mg/kg	5035 A / 8260 D	< 0.003	ND	ND	≤ 25
- Pentane						
- Benzene						
- Toluene						
- m,p-Xylene						
- o-Xylene						
- Ethylbenzene						
- TPH (C <sub>9</sub> - C <sub>15</sub> )	mg/kg	3540 C / 8015 D	< 0.25	ND	0.69	≤ 25
- n-Nonane						
- n-Decane						
- n-Dodecane						
- n-Tetradecane						
- n-Hexadecane						
- TPH (C <sub>16</sub> - C <sub>35</sub> )	mg/kg	3540 C / 8015 D	< 1.85	ND	ND	≤ 8
- n-Octadecane						
- n-Eicosane						
- n-Docosane						
- n-Tetracosane						
- n-Hexacosane						
- n-Octacosane						
- n-Triacontane						
- n-Dotriacontane						
- n-Tetratriacontane						
- Pentatriacontane						

REFERENCE : USEPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 3<sup>rd</sup> ED. 2020

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-n-5863

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิมลจรัสประปา 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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 0645/66  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Hand Auger  
SAMPLING DATE : 26-27/04/2023 SAMPLING TIME : 11:37-11:50, 14:55-15:25  
RECEIVED DATE : 28/04/2023 ANALYTICAL DATE : 08-09/05/2023  
REPORT DATE : 15/05/2023 SITE OPERATOR : Mr. Aniwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 223010\_Soil\_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD <sup>1/</sup>
				MW 9	MW 32	
alpha-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.3
gamma-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 29
Heptachlor	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 5.5
Aldrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.1
beta-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.9
delta-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	-
Heptachlor epoxide	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 2.7
o,p'-DDE	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.001
Endosulfan I	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	-
gamma-Chlordane	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 110
alpha-Chlordane	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 110
p,p'-DDE	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.001
Dieldrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 1.5
o,p'-DDD	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	< 7
Endrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 25
o,p'-DDT	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 120
p,p'-DDD	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 7
Endosulfan II	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	-
p,p'-DDT	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 120
Endrin aldehyde	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	-
Endosulfan sulfate	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	-
Endrin ketone	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	-

REFERENCE : USEPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 3<sup>rd</sup> ED. 2020

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-9-0001

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-n-5863

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).  
4. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

239 ถนนวิภาวดีรังสิต 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

**SOIL SAMPLES ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 0966/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 14/06/2023	SAMPLING TIME	: 09:40-09:50
RECEIVED DATE	: 15/06/2023	ANALYTICAL DATE	: 15-19/06/2023
REPORT DATE	: 27/06/2023	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 223010_Soil_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-14	STANDARD <sup>1)</sup>
pH	-	4500-H B	-	8.07	-
Conductivity	dS/m	EC25 (1:5) / Electrical Conductivity	-	0.036	-
Salinity	ppt	EC25 (1:5) / Electrical Conductivity	-	0.0	-
Arsenic (As)	mg/kg	3050 B/6010 D	< 2.00	16.07	≤ 27
Cadmium (Cd)	mg/kg	3050 B/6010 D	< 1.00	ND	≤ 810
Lead (Pb)	mg/kg	3050 B/6010 D	< 3.00	7.71	≤ 750
Mercury (Hg)	mg/kg	7471 B	< 0.05	ND	≤ 610
Nickel (Ni)	mg/kg	3050 B/6010 D	< 1.00	4.52	≤ 41,000

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020

*Khemchuda Inorn*

(Miss Khemchuda Inorn)

Analyst

REG. NO. 7-239-ก-5976

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).
  4. Reference method : Operation Manual Chemical Analysis in Soil, Land Development Department.
  5. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

239 ถนนวิภาวดีรังสิต 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

**SOIL SAMPLES ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 0966/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 14/06/2023	SAMPLING TIME	: 09:40-09:50
RECEIVED DATE	: 15/06/2023	ANALYTICAL DATE	: 19-20/06/2023
REPORT DATE	: 27/06/2023	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 223010_Soil_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-14	STANDARD <sup>1)</sup>
Naphthalene	mg/kg	3540 C / 8270 E	< 0.005	ND	≤ 1,000
Benzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 15
Ethylbenzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 230
Toluene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 520
m-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 210
o-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 210
p-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 210
Total Xylenes	mg/kg	5035 A / 8260 D	< 0.00075	ND	≤ 210

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020

*Jutaral Jaemruen*

(Miss Jutaral Jaemruen)

Analyst

REG. NO. 7-239-ก-5827

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

239 ถนนมิตรภาพสาย 1 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

**SOIL SAMPLES ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 0966/66  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Hand Auger  
SAMPLING DATE : 14/06/2023 SAMPLING TIME : 09:40-09:50  
RECEIVED DATE : 15/06/2023 ANALYTICAL DATE : 19.26/06/2023  
REPORT DATE : 27/06/2023 SITE OPERATOR : Mr. Aniwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 223010\_Soil\_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-14	STANDARD <sup>1/</sup>
Total Petroleum Hydrocarbon					
- TPH (C <sub>1</sub> - C <sub>6</sub> )	mg/kg	5035 A / 8260 D	< 0.003	ND	≤ 25
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>8</sub> - C <sub>10</sub> )	mg/kg	3540 C / 8015 D	< 0.25	ND	≤ 25
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>14</sub> - C <sub>30</sub> )	mg/kg	3540 C / 8015 D	< 1.85	ND	≤ 8
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- Pentatriacontane					

REFERENCE : USEPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020

Sudaporn Soonthorn  
(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 7-239-0-0001

MR  
(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-R-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

239 ถนนมิตรภาพสาย 1 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

**SOIL SAMPLES ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 0966/66  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Hand Auger  
SAMPLING DATE : 14/06/2023 SAMPLING TIME : 09:40-09:50  
RECEIVED DATE : 15/06/2023 ANALYTICAL DATE : 23-24/06/2023  
REPORT DATE : 27/06/2023 SITE OPERATOR : Mr. Aniwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 223010\_Soil\_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-14	STANDARD <sup>1/</sup>
alpha-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.3
gamma-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 29
Heptachlor	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 5.5
Aldrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.1
beta-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.9
delta-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.3
Heptachlor epoxide	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 2.7
o,p'-DDE	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.001
Endosulfan I	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.001
gamma-Chlordane	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 110
alpha-Chlordane	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 110
p,p'-DDE	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.001
Dieldrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 1.5
o,p'-DDD	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 7
Endrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 25
o,p'-DDT	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 120
p,p'-DDD	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 7
Endosulfan II	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.001
p,p'-DDT	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 120
Endrin aldehyde	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.001
Endosulfan sulfate	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.001
Endrin ketone	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.001

REFERENCE : USEPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020

Sudaporn Soonthorn  
(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 7-239-0-0001

MR  
(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-R-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).
  4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 0663/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 28/04/2023	SAMPLING TIME	: 14:50-15:15, 15:25-15:45
RECEIVED DATE	: 02/05/2023	ANALYTICAL DATE	: 02-05/05/2023
REPORT DATE	: 15/05/2023	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 223010_Soil_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD <sup>1/</sup>
				MW 23	MW 24	
pH	-	4500-H B	-	7.43	8.55	-
Conductivity	dS/m	EC25 (1:5) / Electrical Conductivity	-	0.019	0.040	-
Salinity	ppt	EC25 (1:5) / Electrical Conductivity	-	0.0	0.0	-
Arsenic (As)	mg/kg	3050 B/6010 D	< 2.00	3.41	9.99	≤ 27
Cadmium (Cd)	mg/kg	3050 B/6010 D	< 1.00	ND	ND	≤ 810
Lead (Pb)	mg/kg	3050 B/6010 D	< 3.00	9.69	9.03	≤ 750
Mercury (Hg)	mg/kg	7471 B	< 0.05	0.12	0.12	≤ 610
Nickel (Ni)	mg/kg	3050 B/6010 D	< 1.00	14.95	4.51	≤ 41,000

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020

*Khemchuda Insorn*

( Miss Khemchuda Insorn )

Analyst

REG. NO. 7-239-ก-5976

*Araya Tippasuk*

( Mrs. Araya Tippasuk )

Technical Management Team

REG. NO. 7-239-ก-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).
  4. Reference method : Operation Manual Chemical Analysis in Soil, Land Development Department.
  5. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.	: 0663/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 28/04/2023	SAMPLING TIME	: 14:50-15:15, 15:25-15:45
RECEIVED DATE	: 02/05/2023	ANALYTICAL DATE	: 03-06, 08/05/2023
REPORT DATE	: 15/05/2023	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 223010_Soil_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD <sup>1/</sup>
				MW 23	MW 24	
Naphthalene	mg/kg	3540 C / 8270 E	< 0.005	ND	ND	≤ 1,000
Benzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 15
Ethylbenzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 230
Toluene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 520
m-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 210
o-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 210
p-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 210
Total Xylenes	mg/kg	5035 A / 8260 D	< 0.00075	ND	ND	≤ 210

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020

*Jutarat Jaemruen*

( Miss Jutarat Jaemruen )

Analyst

REG. NO. 7-239-ก-5827

*Araya Tippasuk*

( Mrs. Araya Tippasuk )

Technical Management Team

REG. NO. 7-239-ก-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL. Branch 6 (Refinery)	REQUEST SERVICE No.:	0663/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 28/04/2023	SAMPLING TIME	: 14:50-15:15, 15:25-15:45
RECEIVED DATE	: 02/05/2023	ANALYTICAL DATE	: 05, 09-11/05/2023
REPORT DATE	: Normal	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 223010_Soil_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-defectable)	STATION		STANDARD <sup>U</sup>
				MW 23	MW 24	
Total Petroleum Hydrocarbon						
- TPH (C <sub>3</sub> - C <sub>24</sub> )	mg/kg	5035 A / 8260 D	< 0.003	ND	ND	≤ 25
- Pentane						
- Benzene						
- Toluene						
- m,p-Xylene						
- o-Xylene						
- Ethylbenzene						
- TPH (C <sub>9</sub> - C <sub>16</sub> )	mg/kg	3540 C / 8015 D	≤ 0.25	ND	0.90	≤ 25
- n-Nonane						
- n-Decane						
- n-Dodecane						
- n-Tetradecane						
- n-Hexadecane						
- TPH (C <sub>16</sub> - C <sub>33</sub> )	mg/kg	3540 C / 8015 D	< 1.85	3.85	ND	≤ 8
- n-Octadecane						
- n-Eicosane						
- n-Docosane						
- n-Tetracosane						
- n-Hexacosane						
- n-Octacosane						
- n-Triacontane						
- n-Dotriacontane						
- n-Tetracontane						
- Pentatriacontane						

REFERENCE: USE EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED., 2000

*Sudaporn Soonthorn*

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-9-0001

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-9-5863

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

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

3. <sup>U</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL. Branch 6 (Refinery)	REQUEST SERVICE No.:	0663/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 28/04/2023	SAMPLING TIME	: 14:50-15:15, 15:25-15:45
RECEIVED DATE	: 02/05/2023	ANALYTICAL DATE	: 08-09/05/2023
REPORT DATE	: 15/05/2023	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 223010_Soil_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-defectable)	STATION		STANDARD <sup>U</sup>
				MW 23	MW 24	
alpha-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.3
gamma-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 29
Heptachlor	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 5.5
Aldrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.1
beta-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.9
delta-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.3
Heptachlor epoxide	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 2.7
o,p'-DDE	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.001
Endosulfan I	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.3
gamma-Chlordane	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 110
alpha-Chlordane	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 110
p,p'-DDE	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.001
Dieldrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 1.5
o,p'-DDD	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 7
Endrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 25
o,p'-DDT	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 120
p,p'-DDD	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 7
Endosulfan II	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.3
p,p'-DDT	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 120
Endrin aldehyde	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.3
Endosulfan sulfate	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.3
Endrin ketone	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.3

REFERENCE: USE EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED., 2000

*Sudaporn Soonthorn*

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-9-0001

*(Mrs. Araya Tipparuk)*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-9-5863

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

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

3. <sup>U</sup> Notification of the Ministry of Industry, B.E.2559 (2016).

4. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**SOIL SAMPLES ANALYSIS REPORT**

**CLIENT NAME** : PTT Global Chemical PCL, Branch 6 (Refinery) **REQUEST SERVICE No.** : 0645/66  
**SAMPLING BY** : SECOT Co., Ltd. **SAMPLING METHOD** : Hand Auger  
**SAMPLING DATE** : 26-27/04/2023 **SAMPLING TIME** : 16:15-16:40, 11:00-11:20  
**RECEIVED DATE** : 28/04/2023 **ANALYTICAL DATE** : 28/04/2023-05/05/2023  
**REPORT DATE** : 15/05/2023 **SITE OPERATOR** : Mr. Aniwat Pimwanna  
**SAMPLE CONDITION** : Normal **FILE CODE** : 223010\_Soil\_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD <sup>1/</sup>
				MW 34	MW 35	
pH	-	4500-H <sup>+</sup> B	-	8.18	8.68	-
Conductivity	dS/m	EC25 (1:5) / Electrical Conductivity	-	0.020	0.031	-
Salinity	ppl	EC25 (1:5) / Electrical Conductivity	-	0.0	0.0	-
Arsenic (As)	mg/kg	3050 B/6010 D	< 2.00	2.30	3.98	≤ 27
Cadmium (Cd)	mg/kg	3050 B/6010 D	< 1.00	ND	ND	≤ 810
Lead (Pb)	mg/kg	3050 B/6010 D	< 3.00	5.62	5.77	≤ 750
Mercury (Hg)	mg/kg	7471B	< 0.05	ND	0.27	≤ 610
Nickel (Ni)	mg/kg	3050 B/6010 D	< 1.00	2.86	2.09	≤ 41,000

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020

*Khemchuda Insom*

( Miss Khemchuda Insom )

Analyst

REG. NO. 7-239-n-5976

*(Mrs. Araya Tipparak)*

(Mrs. Araya Tipparak)

Technical Management Team

REG. NO. 7-239-n-5863

**Remark :**

1. Reported analysis refers to submitted sample only.
2. This report shall not be reproduced, except in full, without official approval.
3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).
4. Reference method : Operation Manual Chemical Analysis in Soil, Land Development Department.
5. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**SOIL SAMPLES ANALYSIS REPORT**

**CLIENT NAME** : PTT Global Chemical PCL, Branch 6 (Refinery) **REQUEST SERVICE No.** : 0645/66  
**SAMPLING BY** : SECOT Co., Ltd. **SAMPLING METHOD** : Hand Auger  
**SAMPLING DATE** : 26-27/04/2023 **SAMPLING TIME** : 16:15-16:40, 11:00-11:20  
**RECEIVED DATE** : 28/04/2023 **ANALYTICAL DATE** : 03-06, 08/05/2023  
**REPORT DATE** : 15/05/2023 **SITE OPERATOR** : Mr. Aniwat Pimwanna  
**SAMPLE CONDITION** : Normal **FILE CODE** : 223010\_Soil\_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD <sup>1/</sup>
				MW 34	MW 35	
Naphthalene	mg/kg	3540 C / 8270 E	< 0.005	ND	ND	≤ 1,000
Benzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 15
Ethylbenzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 230
Toluene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 520
m-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 210
o-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 210
p-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 210
Total Xylenes	mg/kg	5035 A / 8260 D	< 0.00075	ND	ND	≤ 210

REFERENCE : US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020

*Jutarat Jaenruen*

( Miss Jutarat Jaenruen )

Analyst

REG. NO. 7-239-n-5827

*(Mrs. Araya Tipparak)*

(Mrs. Araya Tipparak)

Technical Management Team

REG. NO. 7-239-n-5863

**Remark :**

1. Reported analysis refers to submitted sample only.
2. This report shall not be reproduced, except in full, without official approval.
3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).
4. - Not available.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL., Branch 6 (Refinery)	REQUEST SERVICE No.:	: 0645/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 26-27/04/2023	SAMPLING TIME	: 16:15-16:40, 11:00-11:20
RECEIVED DATE	: 28/04/2023	ANALYTICAL DATE	: 05, 09-11/05/2023
REPORT DATE	: Normal	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 223010_Soil_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD <sup>1/</sup>
				MW 34	MW 35	
Total Petroleum Hydrocarbon						
- TPH (C <sub>8</sub> - C <sub>16</sub> )	mg/kg	5035 A / 8260 D	< 0.003	ND	ND	≤ 25
- Pentane						
- Benzene						
- Toluene						
- m,p-Xylene						
- o-Xylene						
- Ethylbenzene						
- TPH (C <sub>18</sub> - C <sub>16</sub> )	mg/kg	3540 C / 8015 D	< 0.25	ND	2.18	≤ 25
- n-Nonane						
- n-Decane						
- n-Dodecane						
- n-Tetradecane						
- n-Hexadecane						
- TPH (C <sub>18</sub> - C <sub>35</sub> )	mg/kg	3540 C / 8015 D	< 1.85	ND	ND	≤ 8
- n-Octadecane						
- n-Eicosane						
- n-Docosane						
- n-Tetracosane						
- n-Hexacosane						
- n-Octacosane						
- n-Triacontane						
- n-Dotriacontane						
- n-Tetracontane						
- Pentatriacontane						

REFERENCE: US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED., 2020

*Sudaporn Soonthorn*  
(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 7-239-9-0001

*(Mrs. Araya Tipparuk)*  
Technical Management Team  
REG. NO. 7-239-9-5863

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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

SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: PTT Global Chemical PCL., Branch 6 (Refinery)	REQUEST SERVICE No.:	: 0645/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 26-27/04/2023	SAMPLING TIME	: 16:15-16:40, 11:00-11:20
RECEIVED DATE	: 28/04/2023	ANALYTICAL DATE	: 08-09/05/2023
REPORT DATE	: 15/05/2023	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 223010_Soil_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD <sup>1/</sup>
				MW 34	MW 35	
alpha-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.3
gamma-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 29
Heptachlor	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 5.5
Aldrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.1
beta-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.9
delta-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	*
Heptachlor epoxide	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 2.7
o,p'-DDE	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.001
Endosulfan I	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	*
gamma-Chlordane	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 110
alpha-Chlordane	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 110
p,p'-DDE	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.001
Dieldrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 1.5
o,p'-DDD	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 7
Endrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 25
o,p'-DDT	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 120
p,p'-DDD	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 7
Endosulfan II	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	*
p,p'-DDT	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 120
Endrin aldehyde	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	*
Endosulfan sulfate	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	*
Endrin ketone	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	*

REFERENCE: US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED., 2020

*Sudaporn Soonthorn*  
(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 7-239-9-0001

*(Mrs. Araya Tipparuk)*  
Technical Management Team  
REG. NO. 7-239-9-5863

- Remark : 1. Reported analysis refers to submitted sample only.  
2. This report shall not be reproduced, except in full, without official approval.  
3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).  
4. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**SOIL SAMPLES ANALYSIS REPORT**

**CLIENT NAME** : PTT Global Chemical PCL, Branch 6 (Refinery) **REQUEST SERVICE No.** : 1191/66  
**SAMPLING BY** : SECOT Co., Ltd. **SAMPLING METHOD** : Hand Auger  
**SAMPLING DATE** : 14/07/2023 **SAMPLING TIME** : 10:07-10:11  
**RECEIVED DATE** : 15/07/2023 **ANALYTICAL DATE** : 15-21/07/2023  
**REPORT DATE** : 22/07/2023 **SITE OPERATOR** : Mr. Aniwat Pimwanna  
**SAMPLE CONDITION** : Normal **FILE CODE** : 223010\_Soil\_July

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	
				MW 36	STANDARD <sup>1)</sup>
pH	-	4500-11 <sup>1)</sup> B	-	7.82	-
Conductivity	dS/m	EC25 (1:5) / Electrical Conductivity	-	0.021	-
Salinity	ppt	EC25 (1:5) / Electrical Conductivity	-	0.0	-
Arsenic (As)	mg/kg	3050 B/6010 D	< 2.00	20.52	≤ 27
Cadmium (Cd)	mg/kg	3050 B/6010 D	< 1.00	ND	≤ 810
Lead (Pb)	mg/kg	3050 B/6010 D	< 3.00	5.51	≤ 750
Mercury (Hg)	mg/kg	7471B	< 0.05	ND	≤ 610
Nickel (Ni)	mg/kg	3050 B/6010 D	< 1.00	3.18	≤ 41,000

REFERENCE : USEPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2000

*Khemcluda Insorn*

(Miss Khemcluda Insorn)

Analyst

REG. NO. 2-239-ก-5976

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).

4. Reference method : Operation Manual Chemical Analysis in Soil, Land Development Department.

5. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**SOIL SAMPLES ANALYSIS REPORT**

**CLIENT NAME** : PTT Global Chemical PCL, Branch 6 (Refinery) **REQUEST SERVICE No.** : 1191/66  
**SAMPLING BY** : SECOT Co., Ltd. **SAMPLING METHOD** : Hand Auger  
**SAMPLING DATE** : 14/07/2023 **SAMPLING TIME** : 10:07-10:11  
**RECEIVED DATE** : 15/07/2023 **ANALYTICAL DATE** : 19, 21/07/2023  
**REPORT DATE** : 22/07/2023 **SITE OPERATOR** : Mr. Aniwat Pimwanna  
**SAMPLE CONDITION** : Normal **FILE CODE** : 223010\_Soil\_July

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	
				MW 36	STANDARD <sup>1)</sup>
Naphthalene	mg/kg	3540 C / 8270 E	< 0.005	0.0070	≤ 1,000
Benzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 15
Ethylbenzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 230
Toluene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 520
m-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 210
o-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 210
p-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 210
Total Xylenes	mg/kg	5035 A / 8260 D	< 0.00075	ND	≤ 210

REFERENCE : USEPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2000

*Jularat Jaemruen*

(Miss Jularat Jaemruen)

Analyst

REG. NO. 2-239-ก-5827

*Araya Tipparuk*

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

239 ถนนวิภาวดีรังสิต 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

**SOIL SAMPLES ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL., Branch 6 (Refinery)	REQUEST SERVICE No.:	1191/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 14/07/2023	SAMPLING TIME	: 10:07-10:11
RECEIVED DATE	: 15/07/2023	ANALYTICAL DATE	: 20/07/2023
REPORT DATE	: 22/07/2023	SITE OPERATOR	: Mr. Aniwat Pimwanua
SAMPLE CONDITION	: Normal	FILE CODE	: 223010_Soil_July

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW 36	STANDARD <sup>1)</sup>
Total Petroleum Hydrocarbon					
- TPH (C <sub>1</sub> - C <sub>6</sub> )	mg/kg	5035 A / 8260 D	< 0.003	ND	≤ 25
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C <sub>7</sub> - C <sub>16</sub> )	mg/kg	3540 C / 8015 D	< 0.25	ND	≤ 25
REFERENCE: US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1 <sup>st</sup> ED., 2020					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C <sub>17</sub> - C <sub>33</sub> )	mg/kg	3540 C / 8015 D	< 1.85	ND	≤ 8
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetratriacontane					
- Pentatriacontane					

REFERENCE: US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED., 2020

**Sudaporn Soonthorn**

(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 2-239-0-0001

**(Mrs. Araya Tipparuk)**

Technical Management Team

REG. NO. 2-239-0-5863

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

239 ถนนวิภาวดีรังสิต 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

**SOIL SAMPLES ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL., Branch 6 (Refinery)	REQUEST SERVICE No.:	1191/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 14/07/2023	SAMPLING TIME	: 10:07-10:11
RECEIVED DATE	: 15/07/2023	ANALYTICAL DATE	: 20-21/07/2023
REPORT DATE	: 22/07/2023	SITE OPERATOR	: Mr. Aniwat Pimwanua
SAMPLE CONDITION	: Normal	FILE CODE	: 223010_Soil_July

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW 36	STANDARD <sup>1)</sup>
alpha-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.3
gamma-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 29
Heptachlor	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 5.5
Aldrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.1
beta-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.9
delta-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	-
Heptachlor epoxide	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 2.7
o,p'-DDE	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.001
Endosulfan I	mg/kg	3550 C / 8081 B	< 0.0002	ND	-
gamma-Chlordane	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 110
alpha-Chlordane	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 110
p,p'-DDE	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 0.001
Dieldrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 1.5
o,p'-DDD	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 7
Endrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 25
o,p'-DDT	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 120
p,p'-DDD	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 7
Endosulfan II	mg/kg	3550 C / 8081 B	< 0.0002	ND	-
p,p'-DDT	mg/kg	3550 C / 8081 B	< 0.0002	ND	≤ 120
Endrin aldehyde	mg/kg	3550 C / 8081 B	< 0.0002	ND	-
Endosulfan sulfate	mg/kg	3550 C / 8081 B	< 0.0002	ND	-
Endrin ketone	mg/kg	3550 C / 8081 B	< 0.0002	ND	-

REFERENCE: US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1<sup>st</sup> ED., 2020

**Sudaporn Soonthorn**

(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 2-239-0-0001

**(Mrs. Araya Tipparuk)**

Technical Management Team

REG. NO. 2-239-0-5863

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).

4. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

239 ถนนวิมลทองประชา 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

**SOIL SAMPLES ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 0676/66  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Hand Auger  
SAMPLING DATE : 03/05/2023 SAMPLING TIME : 11:35-11:55, 10:27-10:45  
RECEIVED DATE : 04/05/2023 ANALYTICAL DATE : 04-05/05/2023  
REPORT DATE : 15/05/2023 SITE OPERATOR : Mr. Aniwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 223010\_Soil\_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD <sup>1)</sup>
				MW 41	MW 42	
pH	-	4500-H <sub>1</sub> B	-	8.87	8.88	-
Conductivity	dS/m	EC25 (1:5) / Electrical Conductivity	-	0.056	0.031	-
Salinity	ppt	EC25 (1:5) / Electrical Conductivity	-	0.0	0.0	-
Arsenic (As)	mg/kg	3050 B/6010 D	< 2.00	3.56	ND	≤ 27
Cadmium (Cd)	mg/kg	3050 B/6010 D	< 1.00	ND	ND	≤ 810
Lead (Pb)	mg/kg	3050 B/6010 D	< 3.00	5.07	ND	≤ 750
Mercury (Hg)	mg/kg	7471B	< 0.05	ND	ND	≤ 610
Nickel (Ni)	mg/kg	3050 B/6010 D	< 1.00	3.02	ND	≤ 41,000

REFERENCE : US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2003

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-R-5976

(Mrs. Araya Tippanuk)

Technical Management Team

REG. NO. 7-239-R-5863

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).

4. Reference method : Operation Manual Chemical Analysis in Soil, Land Development Department.

5. - Not available.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

239 ถนนวิมลทองประชา 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

**SOIL SAMPLES ANALYSIS REPORT**

CLIENT NAME : PTT Global Chemical PCL, Branch 6 (Refinery) REQUEST SERVICE No. : 0676/66  
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Hand Auger  
SAMPLING DATE : 03/05/2023 SAMPLING TIME : 11:35-11:55, 10:27-10:45  
RECEIVED DATE : 04/05/2023 ANALYTICAL DATE : 05-06, 08/05/2023  
REPORT DATE : 15/05/2023 SITE OPERATOR : Mr. Aniwat Pimwanna  
SAMPLE CONDITION : Normal FILE CODE : 223010\_Soil\_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD <sup>1)</sup>
				MW 41	MW 42	
Naphthalene	mg/kg	3540 C / 8270 E	< 0.005	ND	ND	≤ 1,000
Benzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 15
Ethylbenzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 230
Toluene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 520
m-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 210
o-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 210
p-Xylene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 210
Total Xylenes	mg/kg	5035 A / 8260 D	< 0.00075	ND	ND	≤ 210

REFERENCE : US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2003

(Miss Jutarat Jaemvorn)

Analyst

REG. NO. 7-239-R-5827

(Mrs. Araya Tippanuk)

Technical Management Team

REG. NO. 7-239-R-5863

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

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

3. <sup>1)</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**SOIL SAMPLES ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.:	0676/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 03/05/2023	SAMPLING TIME	: 11:35-11:55, 10:27-10:45
RECEIVED DATE	: 04/05/2023	ANALYTICAL DATE	: 05, 09-11/05/2023
REPORT DATE	: Normal	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 223010_Soil_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD <sup>1/</sup>
				MW 41	MW 42	
Total Petroleum Hydrocarbon						
- TPH (C <sub>5</sub> -C <sub>11</sub> )	mg/kg	5035 A / 8260 D	< 0.003	ND	ND	≤ 25
- Pentane						
- Benzene						
- Toluene						
- m,p-Xylene						
- o-Xylene						
- Ethylbenzene						
- TPH (C <sub>12</sub> -C <sub>16</sub> )	mg/kg	3540 C / 8015 D	< 0.25	ND	1.70	≤ 25
- n-Nonane						
- n-Decane						
- n-Dodecane						
- n-Tetradecane						
- n-Hexadecane						
- TPH (C <sub>17</sub> -C <sub>21</sub> )	mg/kg	3540 C / 8015 D	< 1.85	ND	ND	≤ 8
- n-Octadecane						
- n-Eicosane						
- n-Docosane						
- n-Tetracosane						
- n-Hexacosane						
- n-Octacosane						
- n-Triacontane						
- n-Dotriacontane						
- n-Tetracontane						
- Pentatriacontane						

REFERENCE: US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020

*Sudaporn Soonthorn*

(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 3-239-0-0001

*Araya Tipparuk*

(Mrs. Araya Tipparuk)  
Technical Management Team

REG. NO. 3-239-0-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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

**SOIL SAMPLES ANALYSIS REPORT**

CLIENT NAME	: PTT Global Chemical PCL, Branch 6 (Refinery)	REQUEST SERVICE No.:	0676/66
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 03/05/2023	SAMPLING TIME	: 11:35-11:55, 10:27-10:45
RECEIVED DATE	: 04/05/2023	ANALYTICAL DATE	: 08-09/05/2023
REPORT DATE	: 15/05/2023	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 223010_Soil_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD <sup>1/</sup>
				MW 41	MW 42	
alpha-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.3
gamma-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 29
Heptachlor	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 5.5
Aldrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.1
beta-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.9
delta-BHC	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	+
Heptachlor epoxide	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 2.7
o,p'-DDE	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.001
Endosulfan I	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	+
gamma-Chlordane	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 110
alpha-Chlordane	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 110
p,p'-DDE	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 0.001
Dieldrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 1.5
o,p'-DDD	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 7
Endrin	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 25
o,p'-DDT	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 120
p,p'-DDD	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 7
Endosulfan II	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	+
p,p'-DDT	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	≤ 120
Endrin aldehyde	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	+
Endosulfan sulfate	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	+
Endrin ketone	mg/kg	3550 C / 8081 B	< 0.0002	ND	ND	+

REFERENCE: US EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3<sup>rd</sup> ED., 2020

*Sudaporn Soonthorn*

(Miss Sudaporn Soonthorn)  
Analyst

REG. NO. 3-239-0-0001

*Araya Tipparuk*

(Mrs. Araya Tipparuk)  
Technical Management Team

REG. NO. 3-239-0-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
  2. This report shall not be reproduced, except in full, without official approval.
  3. <sup>1/</sup> Notification of the Ministry of Industry, B.E.2559 (2016).
  4. - Not available.

## ระดับเสียงในพื้นที่ทำงาน

---



## Noise Monitoring Result : Working Noise MTR-PTTGC6-Refinery

Location : Air Compressor (K-1701 A, B and Spare) (Panel 3)		Monitor Period : Aug 20, 2025	
SLM Model : SCARLET ST-21D		Serial No : 821080	
Site Operator : Miss Wiraya Patchimboon			
Calibrator Model : Cirrus CR:515		Serial No : 94296	
Calibration Ref dB(A) : 94.0		Certified Date : Feb 27 2025	
SLM Reading / Adjust dB(A) : 93.8/0.0		Expire Date : Feb 25 2026	
Cal Sheet No.: CR-515-2025-201			
Time	Equivalent Sound Pressure Level (dB(A))		
	Aug 20, 2025		
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		84.2	
09:00 – 10:00		84.1	
10:00 – 11:00		84.4	
11:00 – 12:00		84.1	
12:00 – 13:00		84.2	
13:00 – 14:00		84.1	
14:00 – 15:00		84.0	
15:00 – 16:00		84.1	
16:00 – 17:00			
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)*		84.2	
Lmax **		95.8	
Standard-8Hr		90 dB(A)	
Standard-Max		140 dB(A)	

Remark : \* Average time between 08:00-16:00

\*\* Maximum Sound Pressure Level between 08:00-16:00

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Sununta Sirawuttinanon)  
Technical Management Team



## Noise Monitoring Result : Working Noise MTR-PTTGC6-Refinery

Location : Air Blower (K-1001 of K-1003) (Panel 1)		Monitor Period : Aug 20, 2025	
SLM Model : SCARLET ST-21D		Serial No : 821082	
Site Operator : Miss Wiraya Patchimboon			

Calibrator Model : Cirrus CR:515		Serial No : 94296	
Calibration Ref dB(A) : 94.0		Certified Date : Feb 27 2025	
SLM Reading / Adjust dB(A) : 93.8/0.0		Expire Date : Feb 25 2026	
Cal Sheet No.: CR-515-2025-201			

Time	Equivalent Sound Pressure Level (dB(A))	
	Aug 20, 2025	
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		81.2
09:00 - 10:00		81.3
10:00 - 11:00		84.6
11:00 - 12:00		81.1
12:00 - 13:00		81.0
13:00 - 14:00		81.2
14:00 - 15:00		81.3
15:00 - 16:00		81.6
16:00 - 17:00		
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)*	81.8
Lmax **	104.5

Standard-8Hr	90 dB(A)
Standard-Max	140 dB(A)

Remark : \* Average time between 08:00-16:00

\*\* Maximum Sound Pressure Level between 08:00-16:00

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Sununta Sirawuttinanon)  
Technical Management Team



## Noise Monitoring Result : Working Noise MTR-PTTGC6-Refinery

Location : Fan (Below E-1791) (Panel 3)	Monitor Period : Aug 20, 2025
SLM Model : SCARLET ST-21D	Serial No : 821081
Site Operator : Miss Wiraya Patchimboon	
Calibrator Model : Cirrus CR:515	Serial No : 94296
Calibration Ref dB(A) : 94.0	Certified Date : Feb 27 2025
SLM Reading / Adjust dB(A) : 93.8/0.0	Expire Date : Feb 25 2026
Cal Sheet No.: CR-515-2025-201	

Time	Equivalent Sound Pressure Level (dB(A))
	Aug 20, 2025
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	81.8
09:00 - 10:00	81.5
10:00 - 11:00	81.3
11:00 - 12:00	81.4
12:00 - 13:00	81.3
13:00 - 14:00	81.4
14:00 - 15:00	81.5
15:00 - 16:00	81.7
16:00 - 17:00	
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)*	81.5
Lmax **	91.8
Standard-8Hr	90 dB(A)
Standard-Max	140 dB(A)

Remark : \* Average time between 08:00-16:00

\*\* Maximum Sound Pressure Level between 08:00-16:00

*(Signature)*  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

*(Signature)*  
(Miss Sununta Sirawuttinanon)  
Technical Management Team



## Noise Monitoring Result : Working Noise MTR-PTTGC6-Refinery

Location : Generator (Gas Turbine) (Panel 4)	Monitor Period : Aug 20, 2025
SLM Model : SCARLET ST-21D	Serial No : 820723
Site Operator : Miss Wiraya Patchimboon	
Calibrator Model : Cirrus CR:515	Serial No : 94296
Calibration Ref dB(A) : 94.0	Certified Date : Feb 27 2025
SLM Reading / Adjust dB(A) : 93.8/0.0	Expire Date : Feb 25 2026
Cal Sheet No.: CR-515-2025-201	

Time	Equivalent Sound Pressure Level (dB(A))
	Aug 20, 2025
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	79.1
09:00 - 10:00	79.3
10:00 - 11:00	79.4
11:00 - 12:00	78.7
12:00 - 13:00	78.9
13:00 - 14:00	79.2
14:00 - 15:00	79.1
15:00 - 16:00	78.7
16:00 - 17:00	
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)*	79.1
Lmax **	94.0
Standard-8Hr	90 dB(A)
Standard-Max	140 dB(A)

Remark : \* Average time between 08:00-16:00

\*\* Maximum Sound Pressure Level between 08:00-16:00

*(Signature)*  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

*(Signature)*  
(Miss Sununta Sirawuttinanon)  
Technical Management Team



## Noise Monitoring Result : Working Noise

### MTR-PTTGC6-Refinery

Location : Steam Turbine (Steam Generators) (Panel 4)		Monitor Period : Aug 20, 2025	
SLM Model : SCARLET ST-21D		Serial No : 820728	
Site Operator : Miss Wiraya Patchimboon			
Calibrator Model : Cirrus CR:515		Serial No : 94296	
Calibration Ref dB(A) : 94.0		Certified Date : Feb 27 2025	
SLM Reading / Adjust dB(A) : 93.8/0.0		Expire Date : Feb 25 2026	
Cal Sheet No.: CR-515-2025-201			

Time	Equivalent Sound Pressure Level (dB(A))	
	Aug 20, 2025	
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	82.2	
09:00 - 10:00	82.1	
10:00 - 11:00	83.6	
11:00 - 12:00	82.4	
12:00 - 13:00	82.8	
13:00 - 14:00	82.6	
14:00 - 15:00	82.8	
15:00 - 16:00	82.5	
16:00 - 17:00		
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)*	82.6
Lmax **	99.9
Standard-8Hr	90 dB(A)
Standard-Max	140 dB(A)

Remark : \* Average time between 08:00-16:00

\*\* Maximum Sound Pressure Level between 08:00-16:00

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(Miss Sununta Sirawuttinanon)  
Technical Management Team



บริษัท ซีคอต จำกัด  
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.	: 225010-TWA-2508-0017
	Branch 6 (Refinery)		
MEASUREMENT BY	: SECOT Co., Ltd.	MEASUREMENT DATE	: 20/08/2025
OPERATOR	: Miss Wiraya Patchimboon	INSTRUMENT	: Dosimeter
INSTRUMENT MODEL	: Pulsar 22	INSTRUMENT SERIAL NO.	: PB617
CALIBRATOR MODEL	: Pulsar 22R	CALIBRATOR SERIAL NO.	: 79781
CALIBRATION REF.	: 1,000 Hz, 114 dB	CALIBRATION DATE	: 01/04/2025
READING / ADJUST	: 113.8 / 0.2	EXPIRE DATE	: 31/03/2026
CAL SHEET NO.	: NC-PULSAR-2025-071		

LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
			TWA (12 hr)	STANDARD*
Operator Panel 1	07.25-19.00	15.3	75.1	83.0

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(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.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพฯ 10800

239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND

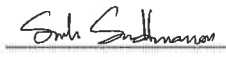
TEL : +66(0) 2959-3600 FAX : +66(0) 2959-3535 E-mail : envserv@secot.co.th

NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 225010-TWA-2508-0017
	Branch 6 (Refinery)		
MEASUREMENT BY	: SECOT Co., Ltd.	MEASUREMENT DATE	: 20/08/2025
OPERATOR	: Miss Wiraya Patchimboon	INSTRUMENT	: Dosimeter
INSTRUMENT MODEL	: Cirrus CR110A	INSTRUMENT SERIAL NO.	: CB1103
CALIBRATOR MODEL	: Cirrus RC110A	CALIBRATOR SERIAL NO.	: 95167
CALIBRATION REF.	: 1,000 Hz, 114 dB	CALIBRATION DATE	: 21/02/2025
READING / ADJUST	: 113.2 / 0.8	EXPIRE DATE	: 20/02/2026
CAL SHEET NO.	: NC-CIRRUS-2025-130		

LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
			TWA (12 hr)	STANDARD*
Operator Panel 2	07.24-19.00	24.1	78.8	83.0

  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

  
(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.



บริษัท ซีคอต จำกัด  
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.	: 225010-TWA-2508-0017
	Branch 6 (Refinery)		
MEASUREMENT BY	: SECOT Co., Ltd.	MEASUREMENT DATE	: 20/08/2025
OPERATOR	: Miss Wiraya Patchimboon	INSTRUMENT	: Dosimeter
INSTRUMENT MODEL	: Pulsar 22	INSTRUMENT SERIAL NO.	: PB618
CALIBRATOR MODEL	: Pulsar 22R	CALIBRATOR SERIAL NO.	: 79781
CALIBRATION REF.	: 1,000 Hz, 114 dB	CALIBRATION DATE	: 01/04/2025
READING / ADJUST	: 113.6 / 0.4	EXPIRE DATE	: 31/03/2026
CAL SHEET NO.	: NC-PULSAR-2025-071		

LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
			TWA (12 hr)	STANDARD*
Operator Panel 3	07.24-19.00	8.0	72.3	83.0

  
(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

  
(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.



บริษัท ซีคอต จำกัด  
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. : 225010-TWA-2508-0017  
Branch 6 (Refinery)  
MEASUREMENT BY : SECOT Co., Ltd. MEASUREMENT DATE : 20/08/2025  
OPERATOR : Miss Wiraya Patchimboon INSTRUMENT : Dosimeter  
INSTRUMENT MODEL : Cirrus CR110A INSTRUMENT SERIAL NO. : CB1050  
CALIBRATOR MODEL : Cirrus RC110A CALIBRATOR SERIAL NO. : 95167  
CALIBRATION REF. : 1,000 Hz, 114 dB CALIBRATION DATE : 20/02/2025  
READING / ADJUST : 113.8 / 0.2 EXPIRE DATE : 19/02/2026  
CAL SHEET NO. : NC-CIRRUS-2025-130

LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
			TWA (12 hr)	STANDARD*
Operator Panel 4	07.25-19.00	19.4	76.2	83.0

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(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.



บริษัท ซีคอต จำกัด  
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. : 225010-TWA-2508-0017  
Branch 6 (Refinery)  
MEASUREMENT BY : SECOT Co., Ltd. MEASUREMENT DATE : 20/08/2025  
OPERATOR : Miss Wiraya Patchimboon INSTRUMENT : Dosimeter  
INSTRUMENT MODEL : Cirrus CR110A INSTRUMENT SERIAL NO. : CB1023  
CALIBRATOR MODEL : Cirrus RC110A CALIBRATOR SERIAL NO. : 95167  
CALIBRATION REF. : 1,000 Hz, 114 dB CALIBRATION DATE : 21/02/2025  
READING / ADJUST : 114.3 / -0.3 EXPIRE DATE : 20/02/2026  
CAL SHEET NO. : NC-CIRRUS-2025-130

LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
			TWA (12 hr)	STANDARD*
Operator Panel 5	07.25-19.00	56.1	80.7	83.0

(Miss Katesarin Vorradetwittaya)  
Environmental Scientist

(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.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนวิมลทองประไพ 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

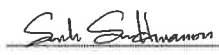
### NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME	: PTT Global Chemical Public Co., Ltd.	REFERENCE NO.	: 225010-TWA-2508-0017
	Branch 6 (Refinery)		
MEASUREMENT BY	: SECOT Co., Ltd.	MEASUREMENT DATE	: 20/08/2025
OPERATOR	: Miss Wiraya Patchimboon	INSTRUMENT	: Dosimeter
INSTRUMENT MODEL	: Cirrus CR110A	INSTRUMENT SERIAL NO.	: CB1042
CALIBRATOR MODEL	: Cirrus RC110A	CALIBRATOR SERIAL NO.	: 95167
CALIBRATION REF.	: 1,000 Hz, 114 dB	CALIBRATION DATE	: 20/02/2025
READING / ADJUST	: 113.6 / 0.4	EXPIRE DATE	: 19/02/2026
CAL SHEET NO.	: NC-CIRRUS-2025-131		

LOCATION	TIME	%DOSE	SOUND PRESSURE LEVEL (dBA)	
			TWA (8 hr)	STANDARD*
Operator Maintenance	08.31-17.00	20.6	78.2	85.0

  
(Miss Katesarin Vorradetwittaya)

Environmental Scientist

  
(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.

## สารเคมีในพื้นที่ทำงาน

---



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 1610/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 21/08/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 29/08/2025
		Test Date	: 10/09/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 20/09/2025

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
Panel 1 :	21/08/2025 08:40-12:40	Hydrogen sulfide	NIOSH 6013/IC	< 0.03	ND	20

Analyst By : Bompa Buddhum  
(Miss Pornnapa Buddhum)

Approved By : Maing 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 2420/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 18/12/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 19/12/2025
		Test Date	: 24/12/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 30/12/2025

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
Panel 1 :	18/12/2025 09:28-13:28	Hydrogen sulfide	NIOSH 6013/IC	< 0.03	ND	20

Analyst By : Bompa Buddhum  
(Miss Pornnapa Buddhum)

Approved By : Maing 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 1610/68
For	: PTT Global Chemical Public Co., Ltd. Branch 6 (Refinery GC6)	Sampling Date	: 21/08/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 29/08/2025
		Test Date	: 05/09/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 20/09/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

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

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
Panel 1 :	21/08/2025 08:40-08:55	Total Hydrocarbon	THC Analyzer / FID	< 0.10	5.33	-

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

Approved By : 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. ND = non-detectable
4. - No Standard.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800  
239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND  
TBL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

ANALYSIS/TEST REPORT

Customer	: EED/SECOT Co., Ltd.	Request Service No.	: 2420/68
For	: PTT Global Chemical Public Co., Ltd. Branch 6 (Refinery GC6)	Sampling Date	: 18/12/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 19/12/2025
		Test Date	: 19/12/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 30/12/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

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

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
Panel 1 :	18/12/2025 09:28-09:43	Total Hydrocarbon	THC Analyzer / FID	< 0.10	12.30	-

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

Approved By : 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. ND = non-detectable
4. - No Standard.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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	: EED/SECOT Co., Ltd.	Request Service No.	: 1610/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 21/08/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 29/08/2025
		Test Date	: 04/09/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 20/09/2025

**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
Panel 1 :	21/08/2025 08:23-12:23	Benzene	OSHA 1005/ GC FID	< 0.04	ND	1

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

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

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

- This report shall not be reproduced, except in full, without official approval.
- Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
- ND = non-detectable.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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	: EED/SECOT Co., Ltd.	Request Service No.	: 2420/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 18/12/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong . Rayong Province 21150	Received Date	: 19/12/2025
		Test Date	: 22/12/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 30/12/2025

**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
Panel 1 :	18/12/2025 09:30-13:30	Benzene	OSHA 1005/ GC FID	< 0.04	ND	1

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

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

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

- This report shall not be reproduced, except in full, without official approval.
- Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
- ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 1656/68
For	: PTT Global Chemical Public Co., Ltd. Branch 6 (Refinery GC6)	Sampling Date	: 02/09/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 04/09/2025
Tel/Fax	: 0-3897-1000 / -	Test Date	: 12/09/2025
		Report Date	: 19/09/2025

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
Panel 2 :	02/09/2025 08:52-12:52	Hydrogen sulfide	NIOSH 6013/IC	≤ 0.03	ND	20

Analyst By : Pornpapa Budthum  
( Miss Pornpapa Budthum )

Approved By : 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 2420/68
For	: PTT Global Chemical Public Co., Ltd. Branch 6 (Refinery GC6)	Sampling Date	: 18/12/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 19/12/2025
Tel/Fax	: 0-3897-1000 / -	Test Date	: 24/12/2025
		Report Date	: 30/12/2025

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
Panel 2 :	18/12/2025 09:35-13:35	Hydrogen sulfide	NIOSH 6013/IC	< 0.03	ND	20

Analyst By : Pornpapa Budthum  
( Miss Pornpapa Budthum )

Approved By : 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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	: EED/SECOT Co., Ltd.	Request Service No.	: 1656/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 02/09/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 04/09/2025
		Test Date	: 12/09/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 19/09/2025

**SAMPLE DESCRIPTION / SAMPLING INFORMATION**

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

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
Panel 2 :	02/09/2025 09:20-09:35	Total Hydrocarbon	THC Analyzer / FID	< 0.10	7.48	-

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

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

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

- This report shall not be reproduced, except in full, without official approval.
- ND = non-detectable
- No Standard.



**บริษัท ซีคอต จำกัด**  
**SECOT CO., LTD.**

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	: EED/SECOT Co., Ltd.	Request Service No.	: 2420/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 18/12/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 19/12/2025
		Test Date	: 19/12/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 30/12/2025

**SAMPLE DESCRIPTION / SAMPLING INFORMATION**

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

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
Panel 2 :	18/12/2025 09:48-10:03	Total Hydrocarbon	THC Analyzer / FID	< 0.10	8.24	-

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

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

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

- This report shall not be reproduced, except in full, without official approval.
- ND = non-detectable
- No Standard.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 1656/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 02/09/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 04/09/2025
Tel/Fax	: 0-3897-1000 / -	Test Date	: 08/09/2025
		Report Date	: 19/09/2025

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
Panel 2 :	02/09/2025 09:20-09:35	Benzene	OSHA 1005/ GC FID	< 0.04	ND	\$

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

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

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

- This report shall not be reproduced, except in full, without official approval.
- Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).  
The concentration limit for short-term exposure.
- ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 2420/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 18/12/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 19/12/2025
Tel/Fax	: 0-3897-1000 / -	Test Date	: 22/12/2025
		Report Date	: 30/12/2025

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
Panel 2 :	18/12/2025 09:48-13:48	Benzene	OSHA 1005/ GC FID	< 0.04	ND	1

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

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

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

- This report shall not be reproduced, except in full, without official approval.
- Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
- ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 1637/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 25/08/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 03/09/2025
		Test Date	: 11/09/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 20/09/2025

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
Panel 3 :	25/08/2025 09:05-13:05	Hydrogen sulfide	NIOSH 6013/IC	< 0.03	ND	20

Analyst By : Pornnapa Budthum  
(Miss Pornnapa Budthum)

Approved By : 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 2420/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 18/12/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 19/12/2025
		Test Date	: 24/12/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 30/12/2025

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
Panel 3 :	18/12/2025 10:10-14:10	Hydrogen sulfide	NIOSH 6013/IC	< 0.03	ND	20

Analyst By : Pornnapa Budthum  
(Miss Pornnapa Budthum)

Approved By : 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 1637/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 25/08/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 03/09/2025
		Test Date	: 06/09/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 20/09/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

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

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
Panel 3 :	25/08/2025 09:25-09:40	NMHC	THC Analyzer/FID	< 0.05	2.64	-

Analyst By : Sudaporn S.  
(Miss Sudaporn Soonthorn)

Approved By : 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. ND = non-detectable.
4. - No Standard.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 2420/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 18/12/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 19/12/2025
		Test Date	: 19/12/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 30/12/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

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

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
Panel 3 :	18/12/2025 10:10-10:25	NMHC	THC Analyzer/FID	< 0.05	2.53	-

Analyst By : Sudaporn S.  
(Miss Sudaporn Soonthorn)

Approved By : 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. ND = non-detectable.
4. - No Standard.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 1637/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 25/08/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 03/09/2025
		Test Date	: 04/09/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 20/09/2025

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
Panel 3 :	25/08/2025 09:05-13:05	Benzene	OSHA 1005/ GC FID	< 0.04	ND	I

Analyst By :

*Sudaporn S.*

( Miss Sudaporn Soonthorn )

Approved By :

*Maia 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 2420/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 18/12/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 19/12/2025
		Test Date	: 22/12/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 30/12/2025

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
Panel 3 :	18/12/2025 10:10-14:10	Benzene	OSHA 1005/ GC FID	< 0.04	ND	I

Analyst By :

*Sudaporn S.*

( Miss Sudaporn Soonthorn )

Approved By :

*Maia 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 1655/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 02/09/2025
Address	: No.8, 1-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 04/09/2025
Tel/Fax	: 0-3897-1000 / -	Test Date	: 12/09/2025
		Report Date	: 20/09/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

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

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT	STANDARD
Panel 4 :	02/09/2025 09:45-10:00	Total Hydrocarbon	THC Analyzer / FID	< 0.10	8.20	-

Analyst By :

Sudaporn S.

( Miss Sudaporn Soonthorn )

Approved By :

Mairisa 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. ND = non-detectable
4. - No Standard.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 2420/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 18/12/2025
Address	: No.8, 1-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 19/12/2025
Tel/Fax	: 0-3897-1000 / -	Test Date	: 19/12/2025
		Report Date	: 30/12/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

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

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT	STANDARD
Panel 4 :	18/12/2025 09:10-09:25	Total Hydrocarbon	THC Analyzer / FID	< 0.10	8.59	-

Analyst By :

Sudaporn S.

( Miss Sudaporn Soonthorn )

Approved By :

Mairisa 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. ND = non-detectable
4. - No Standard.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 1655/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 26/08/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 04/09/2025
		Test Date	: 12/09/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 20/09/2025

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	STANDARD
Panel 5 :	26/08/2025 10:35-14:35	Hydrogen sulfide	NIOSH 6013/IC	< 0.03	ND	20 <sup>u</sup>

Analyst By : Pomnapa Budthum  
( Miss Pomnapa Budthum )

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

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

- This report shall not be reproduced, except in full, without official approval.
- Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
- ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 2420/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 18/12/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 19/12/2025
		Test Date	: 24/12/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 30/12/2025

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
Panel 5 :	18/12/2025 10:30-14:30	Hydrogen sulfide	NIOSH 6013/IC	< 0.03	ND	20

Analyst By : Pomnapa Budthum  
( Miss Pomnapa Budthum )

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

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

- This report shall not be reproduced, except in full, without official approval.
- Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
- ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 1655/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 26/08/2025
Address	: No.8, 1-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 04/09/2025
Tel/Fax	: 0-3897-1000 / -	Test Date	: 12/09/2025
		Report Date	: 20/09/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

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

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT	STANDARD
Panel 5 :	26/08/2025 10:35-10:50	Total Hydrocarbon	THC Analyzer / FID	≤ 0.10	29.80	-

Analyst By :

Sudaporn S.

( Miss Sudaporn Soonthorn )

Approved By :

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. ND = non-detectable

4. - No Standard.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 2420/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 18/12/2025
Address	: No.8, 1-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 19/12/2025
Tel/Fax	: 0-3897-1000 / -	Test Date	: 19/12/2025
		Report Date	: 30/12/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

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

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT	STANDARD
Panel 5 :	18/12/2025 10:30-10:45	Total Hydrocarbon	THC Analyzer / FID	< 0.10	9.32	-

Analyst By :

Sudaporn S.

( Miss Sudaporn Soonthorn )

Approved By :

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. ND = non-detectable

4. - No Standard.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 1655/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 26/08/2025
Address	: No.8, 1-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 04/09/2025
		Test Date	: 08/09/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 20/09/2025

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	STANDARD ppm
Panel 5 :	26/08/2025 10:35-14:35	Benzene	OSHA 1005/ GC FID	< 0.04	ND	I

Analyst By :

*Sudaporn S.*

( Miss Sudaporn Soonthorn )

Approved By :

*Maia Poowasanpetch*

( Miss Narisa Poowasanpetch )

Technical Management Team

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

- This report shall not be reproduced, except in full, without official approval.
- Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
- ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 2420/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 18/12/2025
Address	: No.8, 1-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 19/12/2025
		Test Date	: 22/12/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 30/12/2025

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	STANDARD ppm
Panel 5 :	18/12/2025 10:30-14:30	Benzene	OSHA 1005/ GC FID	< 0.04	ND	I

Analyst By :

*Sudaporn S.*

( Miss Sudaporn Soonthorn )

Approved By :

*Maia Poowasanpetch*

( Miss Narisa Poowasanpetch )

Technical Management Team

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

- This report shall not be reproduced, except in full, without official approval.
- Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
- ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 1655/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 29/08/2025
Address	: No 8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 04/09/2025
		Test Date	: 12/09/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 20/09/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

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

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
Panel 6 :	29/08/2025 08:24-08:39	Total Hydrocarbon	THC Analyzer / FID	< 0.10	9.53	-

Analyst By :

*Sudaporn S.*

( Miss Sudaporn Soonthorn )

Approved By :

*Maina Poonwasanpeth*

( Miss Narisa Poonwasanpeth )

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. ND = non-detectable

4. - No Standard.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 2420/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 18/12/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 19/12/2025
		Test Date	: 19/12/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 30/12/2025

SAMPLE DESCRIPTION / SAMPLING INFORMATION

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

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
Panel 6 :	18/12/2025 10:42-14:42	Total Hydrocarbon	THC Analyzer / FID	≤ 0.10	10.50	-

Analyst By :

*Sudaporn S.*

( Miss Sudaporn Soonthorn )

Approved By :

*Maina Poonwasanpeth*

( Miss Narisa Poonwasanpeth )

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. ND = non-detectable

4. - No Standard.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 1655/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 29/08/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 04/09/2025
		Test Date	: 08/09/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 20/09/2025

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
Panel 6 :	29/08/2025 08:24-12:24	Benzene	OSHA 1005/ GC FID	< 0.04	ND	1

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

Approved By : 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 2420/68
For	: PTT Global Chemical Public Co., Ltd, Branch 6 (Refinery GC6)	Sampling Date	: 18/12/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 19/12/2025
		Test Date	: 22/12/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 30/12/2025

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
Panel 6 :	18/12/2025 10:42-10:57	Benzene	OSHA 1005/ GC FID	< 0.04	ND	1

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

Approved By : 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. Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).  
The concentration limit for short-term exposure.
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 1655/68
For	: PTT Global Chemical Public Co., Ltd. Branch 6 (Refinery GC6)	Sampling Date	: 29/08/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 04/09/2025
		Test Date	: 08/09/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 20/09/2025

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
สถานีขนถ่ายน้ำมันทางรถบรรทุก	29/08/2025 09:04-13:04	Benzene	OSHA 1005/ GC FID	< 0.04	ND	I

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

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

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

- This report shall not be reproduced, except in full, without official approval.
- Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.



บริษัท ซีคอต จำกัด  
SECOT CO., LTD.

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	: EED/SECOT Co., Ltd.	Request Service No.	: 2420/68
For	: PTT Global Chemical Public Co., Ltd. Branch 6 (Refinery GC6)	Sampling Date	: 18/12/2025
Address	: No.8, I-8 Road, Map Ta Phut Industrial Estate, Map Ta Phut, Mueang Rayong , Rayong Province 21150	Received Date	: 19/12/2025
		Test Date	: 19/12/2025
Tel/Fax	: 0-3897-1000 / -	Report Date	: 30/12/2025

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
สถานีขนถ่ายน้ำมันทางรถบรรทุก	18/12/2025 11:00-15:00	Benzene	OSHA 1005/ GC FID	< 0.04	ND	I

Analyst By : Sudaporn S.  
( Miss Sudaporn Soonthorn )

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

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

- This report shall not be reproduced, except in full, without official approval.
- Notification of the Department of Labour Protection and Welfare, B.E.2560 (2017).
4. ND = non-detectable.