

ภาคผนวก ค

เอกสารประกอบการปฏิบัติตาม
มาตรการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม

ภาคผนวก ค.1

ผลการตรวจสอบความถูกต้องของระบบตรวจวัดคุณภาพอากาศ
จากปล่องระบายอากาศแบบต่อเนื่อง (Auditing-RATA)

Relative Accuracy Determination for CEMS STAR PETROLEUM REFINING PUBLIC CO.,LTD. : RFCCU

DATE **March 20,2026**

Run No.	Time		O ₂			NO _x			SO ₂			CO			Fuel Gas (kg/h)
	Start	End	%			ppm@7% O ₂			ppm@7% O ₂			ppm@7% O ₂			
			RM	CEMS	Diff(d _i)	RM	CEMS	Diff(d _i)	RM	CEMS	Diff(d _i)	RM	CEMS	Diff(d _i)	
1	10:20 AM	10:40 AM	3.18	3.71	-0.53	147.70	156.36	-8.66	545.69	586.33	-40.64	56.42	47.59	8.83	887.46
2	10:41 AM	11:01 AM	3.21	3.75	-0.54	148.06	155.69	-7.63	559.82	600.70	-40.88	55.39	46.92	8.47	868.79
3	11:02 AM	11:22 AM	3.12	3.70	-0.58	148.91	155.57	-6.67	548.05	585.74	-37.69	53.32	45.29	8.03	850.74
4	11:23 AM	11:43 AM	3.09	3.67	-0.58	149.87	156.58	-6.71	541.00	574.60	-33.60	54.77	46.09	8.68	828.83
5	12:00 PM	12:20 PM	3.15	3.73	-0.58	148.62	156.59	-7.98	543.81	574.37	-30.55	55.30	46.86	8.45	760.96
6	12:21 PM	12:41 PM	3.30	3.91	-0.61	144.77	153.90	-9.12	542.91	577.16	-34.25	54.80	47.21	7.59	822.60
7	12:42 PM	1:02 PM	3.34	3.93	-0.59	145.56	152.16	-6.60	539.54	574.26	-34.72	55.84	48.04	7.80	853.67
8	1:03 PM	1:23 PM	3.28	3.84	-0.56	146.69	153.80	-7.11	541.26	568.95	-27.69	56.39	48.51	7.88	863.97
9	1:40 PM	2:00 PM	3.16	3.75	-0.59	147.01	154.91	-7.90	541.74	569.65	-27.91	57.35	48.73	8.62	894.34
10	2:01 PM	2:21 PM	3.14	3.72	-0.58	146.90	154.80	-7.90	540.88	568.48	-27.61	57.34	48.93	8.40	928.73
11	2:22 PM	2:42 PM	3.17	3.75	-0.58	147.35	155.44	-8.09	544.30	569.15	-24.85	57.90	49.43	8.46	963.97
12	2:43 PM	3:03 PM	3.43	3.73	-0.30	147.43	156.21	-8.79	551.93	575.30	-23.37	57.28	49.06	8.22	967.43
Average			3.21	3.77	-0.55	147.40	155.17	-7.76	545.08	577.06	-31.98	56.01	47.72	8.29	874.29
Confidence Coefficient			-			0.5418			3.7498			0.2448			
Relative Accuracy			0.55			5.63			6.56			1.54			
Performance Specification : RA			1%			20%**			20%**			5%***			

* Instrumental RM and CEMS data are on a consistent basis, that is, dry and actual oxygen.
** 20% of Emission Standard value (250 ppmvd@7%O₂ for NO_x, 700 ppmvd@7%O₂ for SO₂)
*** 5% of Emission Standard value (554 ppmvd@7%O₂ for CO)

Relative Accuracy Determination for CEMS STAR PETROLEUM REFINING PUBLIC CO.,LTD. : CDU

DATE **March 12,2026**

Run No.	Time		O ₂			NO _x			Load
	Start	End	%			ppm@7% O ₂			
			Instrumental RM	CEMS	Diff(d _i)	Instrumental RM	CEMS	Diff(d _i)	(MW)
1	3:50 PM	4:10 PM	4.79	4.74	0.05	20.73	20.24	0.49	10067.73
2	4:11 PM	4:31 PM	4.69	4.76	-0.07	19.92	20.22	-0.30	10097.91
3	4:32 PM	4:52 PM	4.68	4.74	-0.06	19.93	20.11	-0.18	10101.28
4	4:53 PM	5:13 PM	4.74	4.75	-0.01	20.09	20.05	0.05	10162.83
5	5:14 PM	5:34 PM	4.81	4.76	0.05	20.30	20.38	-0.08	10155.40
6	5:35 PM	5:55 PM	4.69	4.81	-0.12	20.03	20.48	-0.45	10144.98
7	5:56 PM	6:16 PM	4.75	4.78	-0.03	20.17	20.19	-0.03	10208.61
8	6:17 PM	6:37 PM	4.79	4.80	-0.01	20.07	19.96	0.11	10269.44
9	6:38 PM	6:58 PM	4.79	4.77	0.02	20.13	19.83	0.30	10314.18
10	6:59 PM	7:19 PM	4.74	4.73	0.01	20.15	19.72	0.43	10363.61
11	7:20 PM	7:40 PM	4.72	4.72	0.00	20.10	19.67	0.43	10345.76
12	7:41 PM	8:01 PM	4.78	4.81	-0.03	20.32	19.83	0.48	10295.36
Average			4.75	4.76	-0.02	20.16	20.06	0.10	10,210.59
Confidence Coefficient			-			0.2060			
Relative Accuracy			0.02			1.54			
Performance Specification : RA			1%			20%**			

* Instrumental RM and CEMS data are on a consistent basis, that is, dry and actual oxygen.
** 20% of Emission Standard value (25 ppmvd@7%O₂ for NO_x)

Relative Accuracy Determination for CEMS STAR PETROLEUM REFINING PUBLIC CO.,LTD. : SRU

DATE May 25,2026

Run No.	Time		O ₂			SO ₂			Natural Gas
	Start	End	%			ppm@7% O ₂			
			Instrumental RM	CEMS	Diff(d _i)	Instrumental RM	CEMS	Diff(d _i)	
1	3:10 PM	3:30 PM	6.40	5.67	0.73	215.33	234.41	-19.09	506.13
2	3:31 PM	3:51 PM	6.38	6.99	-0.61	213.97	254.89	-40.92	504.75
3	3:52 PM	4:12 PM	6.39	7.00	-0.61	213.66	252.30	-38.64	502.47
4	4:13 PM	4:33 PM	6.37	6.98	-0.61	214.67	253.25	-38.58	503.05
5	4:34 PM	4:54 PM	6.37	6.97	-0.60	209.51	250.12	-40.61	502.30
6	4:55 PM	5:15 PM	6.36	6.97	-0.61	211.82	242.53	-30.71	499.29
7	5:36 PM	5:56 PM	6.53	7.08	-0.55	212.73	243.15	-30.42	499.46
8	5:57 PM	6:17 PM	6.53	7.10	-0.57	212.67	242.27	-29.60	501.19
9	6:18 PM	6:38 PM	6.52	7.08	-0.56	215.25	241.93	-26.69	502.08
10	6:39 PM	6:59 PM	6.42	6.99	-0.57	215.22	243.89	-28.67	498.80
11	7:00 PM	7:20 PM	6.42	7.01	-0.59	216.03	244.33	-28.30	500.65
12	7:21 PM	7:41 PM	6.40	6.97	-0.57	218.89	245.48	-26.59	503.91
Average			6.42	6.90	-0.48	214.14	245.71	-31.57	502.01
Confidence Coefficient			-			4.2735			
Relative Accuracy			0.48			7.17			
Performance Specification : RA			1%*			10%**			

* Instrumental RM and CEMS data are on a consistant basis, that is, dry and actual oxygen.

** 10% of Emission Standard value (500 ppmvd@7%O2 for SO₂)

Relative Accuracy Determination for CEMS STAR PETROLEUM REFINING PUBLIC CO.,LTD. : Boiler 2

DATE March 18,2026

Run No.	Time		O ₂			NO _x			FUEL GAS
	Start	End	%			ppm@7% O ₂			
			Instrumental RM	CEMS	Diff(d _i)	Instrumental RM	CEMS	Diff(d _i)	
1	11:00 AM	11:20 AM	4.52	5.39	-0.87	69.08	82.07	-13.00	3636.95
2	11:21 AM	11:41 AM	4.49	5.39	-0.90	68.11	81.56	-13.45	3653.02
3	11:42 AM	12:02 PM	4.46	5.40	-0.94	67.55	81.63	-14.09	3602.41
4	12:03 PM	12:23 PM	4.54	5.32	-0.78	68.68	81.63	-12.96	3609.60
5	12:40 PM	1:00 PM	4.61	5.37	-0.76	69.65	82.26	-12.62	3636.78
6	1:01 PM	1:21 PM	4.69	5.37	-0.68	70.46	82.08	-11.62	3657.13
7	1:22 PM	1:42 PM	4.67	5.33	-0.66	70.70	82.33	-11.63	3662.06
8	1:43 PM	2:03 PM	4.72	5.37	-0.65	71.36	82.76	-11.40	3629.18
9	2:20 PM	2:40 PM	4.67	5.38	-0.71	72.91	82.41	-9.50	3716.48
10	2:41 PM	3:01 PM	4.70	5.41	-0.71	71.95	82.87	-10.93	3701.14
11	3:02 PM	3:22 PM	4.78	5.31	-0.53	71.93	81.46	-9.52	3715.84
12	3:23 PM	3:43 PM	4.75	5.41	-0.66	72.87	81.95	-9.08	3752.38
Average			4.63	5.37	-0.74	70.44	82.09	-11.65	3,664.41
Confidence Coefficient			-			1.0491			
Relative Accuracy			0.74			18.03			
Performance Specification : RA			1%			20%**			

* Instrumental RM and CEMS data are on a consistant basis, that is, dry and actual oxygen.

** 20% of Emission Standard value (120 ppmvd@7%O2 for NO_x)

Relative Accuracy Determination for CEMS STAR PETROLEUM REFINING PUBLIC CO.,LTD. : HRSG 1

DATE **March 19,2026**

Run No.	Time		O ₂			NO _x			Fuel Gas (Nm3/h)
	Start	End	%			ppm@7% O ₂			
			Instrumental RM	CEMS	Diff(d _i)	Instrumental RM	CEMS	Diff(d _i)	
1	10:00 AM	10:20 AM	14.16	13.84	0.32	122.17	128.62	-6.45	3995.96
2	10:21 AM	10:41 AM	14.08	13.83	0.25	125.00	130.02	-5.02	3987.96
3	10:42 AM	11:02 AM	14.06	13.83	0.23	123.11	127.97	-4.86	3999.32
4	11:03 AM	11:23 AM	14.06	13.82	0.24	123.15	125.36	-2.21	4009.86
5	11:40 AM	12:00 PM	14.02	13.82	0.20	113.83	111.08	2.74	4032.08
6	12:01 PM	12:21 PM	14.03	13.83	0.20	114.09	111.57	2.52	4031.11
7	12:22 PM	12:42 PM	14.03	13.82	0.21	113.36	110.16	3.21	4054.27
8	12:43 PM	1:03 PM	14.02	13.82	0.20	104.67	100.40	4.27	4118.58
9	1:20 PM	1:40 PM	14.02	13.80	0.22	95.68	92.82	2.87	4141.91
10	1:41 PM	2:01 PM	14.03	13.80	0.23	96.21	92.54	3.66	4141.91
11	2:02 PM	2:22 PM	14.02	13.80	0.22	94.94	91.62	3.31	4143.18
12	2:23 PM	2:43 PM	14.04	13.81	0.23	92.30	90.95	1.35	4151.71
Average			14.05	13.82	0.23	109.88	109.43	0.45	4,067.32
Confidence Coefficient			-			2.4959			
Relative Accuracy			0.23			2.68			
Performance Specification : RA			1%			20%**			

* Instrumental RM and CEMS data are on a constant basis, that is, dry and actual oxygen.

** 20% of Emission Standard value (160 ppmvd@7%O₂ for NO_x)

ภาคผนวก ค.2

แผนการสำรวจสภาพเศรษฐกิจ-สังคม และความคิดเห็นของประชาชน
ประจำปี พ.ศ. 2569



By SECOT Co.,Ltd.

[illegible]

กลุ่มเป้าหมาย

504 ตัวอย่าง

1

ผู้แทนครัวเรือน

ผู้แทนครัวเรือนที่อยู่ในรัศมี 5 กิโลเมตร
จากขอบเขตพื้นที่โครงการ (1 ครัวเรือน / 1 ตัวอย่าง)
จำนวน 420 ตัวอย่าง

2

ผู้นำชุมชน

ผู้นำชุมชนในรัศมี 5 กิโลเมตร
จากขอบเขตพื้นที่โครงการ (1 ชุมชน / 1 ตัวอย่าง)
จำนวน 39 ตัวอย่าง

3

หน่วยงานที่เกี่ยวข้อง/พื้นที่อ่อนไหว

หน่วยงานและสถานที่อ่อนไหว ในพื้นที่
(1 หน่วยงาน / 1 ตัวอย่าง)
จำนวน 35 ตัวอย่าง

4

สถานประกอบการข้างเคียง

ผู้แทนสถานประกอบการที่อยู่ข้างเคียงโครงการ
(1 สถานประกอบการ / 1 ตัวอย่าง)
จำนวน 10 ตัวอย่าง

ขั้นตอนการสำรวจความคิดเห็น

ส่งจดหมายและโทรศัพท์ประสานงาน

ส่งจดหมาย กลุ่มเป้าหมาย
และโทรศัพท์ประสานงานกับผู้นำชุมชน
ล่วงหน้าก่อนลงสำรวจความคิดเห็น

ประสานงานผู้นำชุมชนก่อนเข้าพื้นที่

เข้าพบ/ประสานงานผู้นำชุมชนเพื่อสรุป
จำนวนตัวอย่าง/กลุ่มเป้าหมายก่อน
ดำเนินการสำรวจ การสุ่มตัวอย่าง
ศึกษาคำแห่งที่ตั้งของครัวเรือนในชุมชน
ที่ทำการศึกษ และกำหนดพื้นที่ทำการ
สำรวจให้มีการกระจายตัวอย่างเหมาะสม
สามารถเป็นตัวอย่างครัวเรือนที่อยู่ในพื้นที่
ศึกษาจริง

การสำรวจความคิดเห็น

ประชาสัมพันธ์รายละเอียดของโครงการ
เบื้องต้นให้ผู้ตอบแบบสอบถามก่อนดำเนินการ
สัมภาษณ์ (ผ่านพับโครงการฯ / แผนที่ตั้งของ
โครงการ)

ตรวจสอบความครบถ้วน

ตรวจสอบความครบถ้วนของแบบสอบถาม/
ถ่ายรูป (ขออนุญาตผู้ให้สัมภาษณ์ก่อน)/
บันทึกพิกัด GPS



ภาคผนวก ง

ใบรับรองผลการตรวจวัดคุณภาพสิ่งแวดล้อม

ใบรับรองผลการตรวจวัดคุณภาพอากาศในบรรยากาศ



Ambient Air Monitoring Results : Sulfur dioxide

MTR-SPRC PLC-Refinery

Location : With in Refinery Plant, North

Monitor Period : 17-24 Mar 2026

Analyzer Model : API 100A

Station No : SS2-01

Serial No : 376

Site Operator : Mr. Song Hengchwankun

Calibrator Model : Teledyne 700E

Serial No : 1367

Calibration Gas Cylinder I.D.: EB0102326

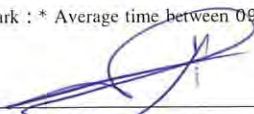
Certified Date : 10 Jan 2026

Cal Concentration (ppb) : 0,100,200,400

Expire Date : 09 Jan 2027

Time	SO2 Concentration (ppb)						
	17-18 Mar 2026	18-19 Mar 2026	19-20 Mar 2026	20-21 Mar 2026	21-22 Mar 2026	22-23 Mar 2026	23-24 Mar 2026
09:00 - 10:00	2.0	1.1	1.9	3.2	1.5	2.0	2.6
10:00 - 11:00	2.0	1.7	2.7	3.2	2.1	2.1	2.4
11:00 - 12:00	1.9	1.8	2.6	2.9	1.9	2.2	2.1
12:00 - 13:00	1.8	1.4	2.7	2.7	2.0	2.4	1.9
13:00 - 14:00	2.1	1.0	2.6	2.8	2.1	2.3	2.0
14:00 - 15:00	1.8	1.3	2.8	2.7	2.2	2.5	1.7
15:00 - 16:00	2.0	1.5	2.9	3.1	2.2	2.2	1.9
16:00 - 17:00	1.7	1.6	3.0	3.1	2.5	2.5	2.4
17:00 - 18:00	1.6	1.8	3.0	3.3	2.1	1.8	2.3
18:00 - 19:00	1.9	1.9	3.1	3.2	2.2	2.1	2.7
19:00 - 20:00	2.1	1.9	3.0	2.9	1.7	2.2	2.4
20:00 - 21:00	2.1	1.8	2.9	2.6	2.3	2.7	2.3
21:00 - 22:00	1.5	1.7	2.2	2.4	2.4	2.3	2.3
22:00 - 23:00	1.8	1.7	2.8	2.2	2.4	2.3	2.3
23:00 - 00:00	1.3	1.8	2.2	2.1	2.3	2.3	2.3
00:00 - 01:00	1.1	1.8	2.7	1.6	2.2	2.5	2.6
01:00 - 02:00	1.4	1.9	3.0	1.9	2.3	2.4	2.7
02:00 - 03:00	1.6	1.9	2.8	2.0	2.3	2.4	2.3
03:00 - 04:00	1.8	2.0	2.9	2.3	2.1	2.5	3.1
04:00 - 05:00	1.2	2.1	2.6	2.1	2.4	2.3	2.9
05:00 - 06:00	1.3	2.3	2.7	2.1	2.4	2.5	2.4
06:00 - 07:00	1.4	2.1	2.9	1.8	1.6	2.3	2.5
07:00 - 08:00	1.3	2.4	2.9	1.6	1.5	2.6	2.5
08:00 - 09:00	1.1	3.0	3.0	2.1	2.4	2.5	2.2
Average-24Hr*	1.7	1.8	2.7	2.5	2.1	2.3	2.4
Max-1Hr	2.1	3.0	3.1	3.3	2.5	2.7	3.1
Min-1Hr	1.1	1.0	1.9	1.6	1.5	1.8	1.7
Standard-1Hr	100 ppb						
Standard-24Hr	50 ppb						

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


 (Miss Katesarin Vorradetwittaya)
 Environmental Scientist


 (Miss Preeda Somjai)
 Technical Management Team



Ambient Air Monitoring Results : Sulfur dioxide

MTR-SPRC PLC-Refinery

Location : Map Ta Phut New Town

Monitor Period : 17-24 Mar 2026

Analyzer Model : API 100A

Station No : SS2-03

Serial No : 342

Site Operator : Mr. Song Hengchwankun

Calibrator Model : Teledyne 700E

Serial No : 1367

Calibration Gas Cylinder I.D.: EB0102326

Certified Date : 10 Jan 2026

Cal Concentration (ppb) : 0,100,200,400

Expire Date : 09 Jan 2027

Time	SO2 Concentration (ppb)						
	17-18 Mar 2026	18-19 Mar 2026	19-20 Mar 2026	20-21 Mar 2026	21-22 Mar 2026	22-23 Mar 2026	23-24 Mar 2026
14:00 - 15:00	3.2	3.5	3.8	3.0	3.4	2.9	4.4
15:00 - 16:00	3.4	3.6	2.5	2.8	3.2	2.9	4.2
16:00 - 17:00	3.3	3.9	2.0	3.4	2.8	3.0	4.1
17:00 - 18:00	3.2	3.9	2.3	3.1	3.2	3.0	3.8
18:00 - 19:00	3.3	3.8	2.4	2.9	3.5	2.8	3.7
19:00 - 20:00	3.8	3.8	2.2	2.9	3.3	3.0	3.8
20:00 - 21:00	3.9	3.8	1.7	2.8	3.2	3.8	4.0
21:00 - 22:00	3.0	3.3	2.0	3.5	3.1	3.8	4.3
22:00 - 23:00	3.2	3.0	2.4	3.3	2.9	4.0	4.0
23:00 - 00:00	3.0	2.9	2.8	2.7	3.1	4.1	3.7
00:00 - 01:00	3.3	3.2	3.4	2.8	3.3	4.0	3.4
01:00 - 02:00	3.2	2.8	3.7	2.9	3.1	4.2	3.1
02:00 - 03:00	3.0	2.3	3.2	3.3	2.9	4.4	3.5
03:00 - 04:00	3.5	2.3	3.1	3.1	3.1	4.3	3.3
04:00 - 05:00	3.1	2.7	3.3	3.0	2.9	4.1	3.2
05:00 - 06:00	2.6	3.1	3.4	2.9	2.8	3.9	3.4
06:00 - 07:00	3.4	2.9	2.9	3.0	2.9	4.1	3.4
07:00 - 08:00	3.8	2.7	2.9	2.8	2.9	4.0	3.5
08:00 - 09:00	4.2	2.5	3.3	2.8	3.2	4.0	3.4
09:00 - 10:00	3.7	3.0	3.4	3.3	3.4	4.1	3.4
10:00 - 11:00	3.2	3.1	3.3	3.0	3.1	4.2	3.5
11:00 - 12:00	3.2	3.6	3.0	3.0	2.9	4.3	3.4
12:00 - 13:00	3.7	5.1	3.4	3.1	3.0	4.2	3.6
13:00 - 14:00	3.7	4.3	3.6	2.9	2.9	4.4	3.6
Average-24Hr*	3.4	3.3	2.9	3.0	3.1	3.8	3.7
Max-1Hr	4.2	5.1	3.8	3.5	3.5	4.4	4.4
Min-1Hr	2.6	2.3	1.7	2.7	2.8	2.8	3.1
Standard-1Hr	100 ppb						
Standard-24Hr	50 ppb						

Remark : * Average time between 14:00-14:00


 (Miss Katesarin Vorradetwittaya)
 Environmental Scientist


 (Miss Preeda Somjai)
 Technical Management Team



Ambient Air Monitoring Results : Sulfur dioxide

MTR-SPRC PLC-Refinery

Location : Ban Plong Community

Monitor Period : 17-24 Mar 2026

Analyzer Model : API 100A

Station No : SS2-02

Serial No : 382

Site Operator : Mr. Song Hengchwankun

Calibrator Model : Teledyne 700E

Serial No : 1367

Calibration Gas Cylinder I.D.: EB0102326

Certified Date : 10 Jan 2026

Cal Concentration (ppb) : 0,100,200,400

Expire Date : 09 Jan 2027

Time	SO2 Concentration (ppb)						
	17-18 Mar 2026	18-19 Mar 2026	19-20 Mar 2026	20-21 Mar 2026	21-22 Mar 2026	22-23 Mar 2026	23-24 Mar 2026
12:00 - 13:00	2.5	2.8	3.5	3.7	2.9	2.5	2.3
13:00 - 14:00	3.1	2.2	3.9	3.8	3.0	2.5	2.4
14:00 - 15:00	3.6	2.2	4.1	3.7	3.0	2.6	2.0
15:00 - 16:00	3.3	2.2	4.2	3.8	2.6	2.9	2.1
16:00 - 17:00	2.9	2.5	4.7	3.3	2.6	3.0	2.0
17:00 - 18:00	2.8	2.5	4.6	3.0	2.7	3.0	1.8
18:00 - 19:00	3.0	2.4	4.2	3.1	2.6	3.0	1.9
19:00 - 20:00	3.3	2.4	4.5	3.2	2.9	3.0	2.0
20:00 - 21:00	3.2	2.5	4.7	3.3	3.1	2.8	2.2
21:00 - 22:00	2.8	2.6	4.6	3.2	2.9	2.9	2.3
22:00 - 23:00	2.6	2.3	4.5	2.6	2.7	2.9	2.2
23:00 - 00:00	2.4	4.2	4.7	3.2	2.6	2.8	1.9
00:00 - 01:00	2.4	4.0	4.2	3.3	2.6	3.1	1.7
01:00 - 02:00	2.6	3.9	4.0	3.2	2.4	3.6	1.8
02:00 - 03:00	2.5	3.9	4.0	3.1	2.3	3.5	2.2
03:00 - 04:00	2.8	4.0	3.9	3.0	2.5	3.5	2.5
04:00 - 05:00	3.2	3.8	3.6	3.1	2.6	3.2	2.3
05:00 - 06:00	3.1	4.0	3.5	2.8	2.6	3.1	2.1
06:00 - 07:00	3.0	3.8	3.9	2.3	2.3	2.8	1.9
07:00 - 08:00	2.9	3.6	3.6	2.4	2.7	2.6	2.0
08:00 - 09:00	2.9	3.7	3.5	2.6	2.7	2.3	2.1
09:00 - 10:00	2.8	3.8	3.7	2.9	2.9	2.2	2.1
10:00 - 11:00	2.8	3.3	3.5	2.6	2.3	2.3	1.8
11:00 - 12:00	2.9	3.1	3.7	2.6	2.4	2.1	1.9
Average-24Hr*	2.9	3.2	4.1	3.1	2.7	2.8	2.1
Max-1Hr	3.6	4.2	4.7	3.8	3.1	3.6	2.5
Min-1Hr	2.4	2.2	3.5	2.3	2.3	2.1	1.7
Standard-1Hr	100 ppb						
Standard-24Hr	50 ppb						

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


 (Miss Katesarin Vorradetwittaya)
 Environmental Scientist


 (Miss Preeda Somjai)
 Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide

MTR-SPRC PLC-Refinery

Location : With in Refinery Plant, North

Monitor Period : 17-24 Mar 2026

Analyzer Model : API 200A

Station No : SS2-01

Serial No : 1523

Site Operator : Mr. Song Hengchwankun

Calibrator Model : Teledyne 700E

Serial No : 1367

Calibration Gas Cylinder I.D.: EB0102326

Certified Date : 08 Jan 2026

Cal Concentration (ppb) : 0,100,200,400

Expire Date : 07 Jan 2027

Time	NO2 Concentration (ppb)						
	17-18 Mar 2026	18-19 Mar 2026	19-20 Mar 2026	20-21 Mar 2026	21-22 Mar 2026	22-23 Mar 2026	23-24 Mar 2026
09:00 - 10:00	5.0	8.8	4.7	5.6	5.0	3.6	5.6
10:00 - 11:00	5.3	9.0	2.2	1.9	5.7	1.1	6.4
11:00 - 12:00	2.6	8.4	3.5	6.7	4.9	4.3	4.5
12:00 - 13:00	4.2	8.7	2.5	5.4	4.6	1.4	5.9
13:00 - 14:00	2.8	6.4	3.0	2.7	5.3	2.4	4.4
14:00 - 15:00	3.2	6.7	3.5	3.6	1.9	3.0	4.7
15:00 - 16:00	4.9	6.7	4.7	8.2	6.9	3.8	4.2
16:00 - 17:00	5.2	8.8	4.1	5.8	5.2	6.6	3.5
17:00 - 18:00	4.4	6.3	6.2	8.7	4.5	4.0	2.7
18:00 - 19:00	2.5	8.4	4.7	6.5	1.3	2.4	2.8
19:00 - 20:00	2.1	8.9	3.3	4.0	1.4	3.0	3.0
20:00 - 21:00	6.1	6.9	2.7	1.8	3.1	5.1	4.0
21:00 - 22:00	5.2	5.2	2.4	3.5	3.5	5.4	3.2
22:00 - 23:00	4.5	3.7	5.7	4.9	5.3	5.8	3.4
23:00 - 00:00	3.1	1.9	6.2	1.1	4.0	5.9	2.6
00:00 - 01:00	5.0	1.8	4.7	5.4	1.6	4.4	3.1
01:00 - 02:00	7.0	4.7	3.1	2.7	2.8	4.4	3.0
02:00 - 03:00	7.4	5.9	3.3	1.3	1.4	4.3	3.1
03:00 - 04:00	4.5	3.5	2.4	3.3	2.5	3.8	4.3
04:00 - 05:00	5.2	4.3	6.2	3.9	1.8	3.2	3.1
05:00 - 06:00	2.2	3.0	4.9	4.9	1.8	4.7	2.7
06:00 - 07:00	5.0	6.3	5.2	4.2	2.0	5.5	2.2
07:00 - 08:00	1.9	2.7	3.9	4.9	5.5	5.9	3.2
08:00 - 09:00	3.3	4.0	5.0	4.4	2.2	5.2	3.8
Average-24Hr*	4.3	5.9	4.1	4.4	3.5	4.1	3.7
Max-1Hr	7.4	9.0	6.2	8.7	6.9	6.6	6.4
Min-1Hr	1.9	1.8	2.2	1.1	1.3	1.1	2.2
Standard-1Hr	120 ppb						
Standard-24Hr	-						

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


 (Miss Katesarin Vorradetwittaya)
 Environmental Scientist


 (Miss Preeda Somjai)
 Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide

MTR-SPRC PLC-Refinery

Location : Map Ta Phut New Town

Monitor Period : 17-24 Mar 2026

Analyzer Model : API 200A

Station No : SS2-03

Serial No : 2386

Site Operator : Mr. Song Hengchwankun

Calibrator Model : Teledyne 700E

Serial No : 1367

Calibration Gas Cylinder I.D.: EB0102326

Certified Date : 08 Jan 2026

Cal Concentration (ppb) : 0,100,200,400

Expire Date : 07 Jan 2027

Time	NO2 Concentration (ppb)						
	17-18 Mar 2026	18-19 Mar 2026	19-20 Mar 2026	20-21 Mar 2026	21-22 Mar 2026	22-23 Mar 2026	23-24 Mar 2026
14:00 - 15:00	5.9	3.9	4.2	6.9	5.5	3.9	4.4
15:00 - 16:00	6.3	3.2	3.8	5.1	6.0	5.0	9.9
16:00 - 17:00	5.7	6.9	3.9	3.2	5.3	5.1	8.4
17:00 - 18:00	6.1	5.8	5.4	3.4	7.7	3.7	6.6
18:00 - 19:00	4.6	4.7	5.0	4.2	5.2	2.7	2.6
19:00 - 20:00	5.5	5.7	4.0	3.2	4.6	4.2	5.2
20:00 - 21:00	2.4	4.5	5.2	4.6	4.8	8.4	4.2
21:00 - 22:00	2.7	4.0	4.8	5.9	6.2	2.4	7.7
22:00 - 23:00	6.6	6.0	4.4	3.6	4.6	4.8	4.7
23:00 - 00:00	7.6	2.7	4.7	5.0	2.4	4.4	3.1
00:00 - 01:00	5.9	4.3	6.1	2.8	3.0	3.6	4.2
01:00 - 02:00	7.8	4.3	2.2	3.5	2.7	3.5	4.7
02:00 - 03:00	5.8	3.9	4.5	3.3	4.4	2.5	5.7
03:00 - 04:00	5.1	5.8	7.2	3.4	3.2	8.5	2.8
04:00 - 05:00	3.4	6.7	5.6	4.0	4.7	5.1	5.4
05:00 - 06:00	4.4	5.8	7.7	2.9	6.0	7.2	3.7
06:00 - 07:00	5.3	5.9	1.7	5.0	4.5	1.8	5.2
07:00 - 08:00	7.4	2.5	6.5	2.8	3.9	1.5	6.5
08:00 - 09:00	6.0	4.0	3.8	4.4	5.0	5.6	6.3
09:00 - 10:00	4.6	3.9	4.9	5.7	7.0	4.1	8.5
10:00 - 11:00	3.2	6.6	6.6	9.7	4.8	7.4	5.4
11:00 - 12:00	6.1	3.4	4.4	6.5	6.2	2.5	6.6
12:00 - 13:00	5.8	4.2	3.1	4.3	5.4	8.5	7.5
13:00 - 14:00	5.2	5.4	4.6	3.8	4.7	4.2	7.5
Average-24Hr*	5.4	4.8	4.8	4.5	4.9	4.6	5.7
Max-1Hr	7.8	6.9	7.7	9.7	7.7	8.5	9.9
Min-1Hr	2.4	2.5	1.7	2.8	2.4	1.5	2.6
Standard-1Hr	120 ppb						
Standard-24Hr	-						

Remark : * Average time between 14:00-14:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide

MTR-SPRC PLC-Refinery

Location : Ban Plong Community

Monitor Period : 17-24 Mar 2026

Analyzer Model : API 200A

Station No : SS2-02

Serial No : 2385

Site Operator : Mr. Song Hengchwankun

Calibrator Model : Teledyne 700E

Serial No : 1367

Calibration Gas Cylinder I.D.: EB0102326

Certified Date : 08 Jan 2026

Cal Concentration (ppb) : 0,100,200,400

Expire Date : 07 Jan 2027

Time	NO2 Concentration (ppb)						
	17-18 Mar 2026	18-19 Mar 2026	19-20 Mar 2026	20-21 Mar 2026	21-22 Mar 2026	22-23 Mar 2026	23-24 Mar 2026
12:00 - 13:00	7.3	6.2	7.4	8.2	7.4	4.5	5.6
13:00 - 14:00	7.4	8.1	5.7	5.9	5.8	3.0	6.7
14:00 - 15:00	8.7	9.1	4.7	4.5	4.4	5.1	6.1
15:00 - 16:00	10.1	6.6	6.2	4.8	6.1	4.3	6.7
16:00 - 17:00	8.6	4.7	6.1	4.2	5.1	6.3	5.4
17:00 - 18:00	6.5	4.2	5.8	5.5	4.0	4.4	4.9
18:00 - 19:00	3.9	6.4	3.7	7.0	4.2	3.6	5.6
19:00 - 20:00	6.0	8.2	4.1	7.2	5.6	2.7	7.0
20:00 - 21:00	3.6	6.6	5.6	8.2	3.3	3.2	4.9
21:00 - 22:00	4.9	5.6	5.0	4.7	5.7	4.3	5.4
22:00 - 23:00	6.4	3.8	3.0	5.6	3.3	4.8	3.6
23:00 - 00:00	3.5	2.0	4.8	6.4	1.8	5.6	4.5
00:00 - 01:00	2.7	2.2	5.1	3.5	3.9	2.3	5.7
01:00 - 02:00	3.6	3.7	5.7	3.8	4.5	2.7	6.1
02:00 - 03:00	4.9	2.3	3.8	3.2	2.9	4.6	3.6
03:00 - 04:00	3.0	3.4	3.1	6.1	4.0	4.4	6.4
04:00 - 05:00	3.1	3.4	3.7	4.9	3.1	3.9	4.4
05:00 - 06:00	3.3	4.1	4.7	3.0	4.0	2.9	6.7
06:00 - 07:00	3.8	6.5	5.1	4.1	5.4	2.4	3.2
07:00 - 08:00	6.2	5.5	3.5	3.1	7.2	4.5	6.0
08:00 - 09:00	6.1	7.7	6.8	5.4	6.2	6.1	10.4
09:00 - 10:00	9.2	8.2	4.0	7.0	8.2	6.7	7.9
10:00 - 11:00	6.6	7.8	9.3	6.4	6.4	6.6	7.1
11:00 - 12:00	4.9	6.9	6.3	7.7	7.4	4.9	6.9
Average-24Hr*	5.6	5.6	5.1	5.4	5.0	4.3	5.9
Max-1Hr	10.1	9.1	9.3	8.2	8.2	6.7	10.4
Min-1Hr	2.7	2.0	3.0	3.0	1.8	2.3	3.2
Standard-1Hr	120 ppb						
Standard-24Hr	-						

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


 (Miss Katesarin Vorradetwittaya)
 Environmental Scientist


 (Miss Preeda Somjai)
 Technical Management Team



Ambient Air Monitoring Results : Carbon monoxide

MTR-SPRC PLC-Refinery

Location : With in Refinery Plant, North

Monitor Period : 17-24 Mar 2026

Analyzer Model : Teledyne 300E

Station No : SS2-01

Serial No : 759

Site Operator : Mr. Song Hengchwankun

Calibrator Model : Teledyne T700

Serial No : 1367

Calibration Gas Cylinder I.D.: EB0108319

Certified Date : 06 Jan 2026

Cal Concentration (ppb) : 0,100,200,400

Expire Date : 05 Jan 2027

Time	CO Concentration (ppm)						
	17-18 Mar 2026	18-19 Mar 2026	19-20 Mar 2026	20-21 Mar 2026	21-22 Mar 2026	22-23 Mar 2026	23-24 Mar 2026
09:00 - 10:00	1.2	0.8	1.0	0.8	1.0	0.6	0.6
10:00 - 11:00	1.2	0.8	0.8	0.9	0.8	0.9	0.8
11:00 - 12:00	1.2	0.6	1.1	1.0	0.8	0.8	0.6
12:00 - 13:00	1.1	0.9	0.9	0.8	0.8	0.8	0.4
13:00 - 14:00	0.9	1.0	0.9	0.7	0.9	0.6	0.6
14:00 - 15:00	1.1	1.0	0.9	0.9	0.7	0.8	0.7
15:00 - 16:00	1.1	1.2	0.6	0.9	0.6	1.0	0.6
16:00 - 17:00	1.2	1.0	0.8	1.0	0.5	0.8	0.7
17:00 - 18:00	1.2	1.0	1.1	0.8	0.5	0.8	0.5
18:00 - 19:00	1.1	0.8	1.0	0.7	0.6	0.8	0.8
19:00 - 20:00	0.9	0.5	1.1	1.1	0.9	1.1	0.8
20:00 - 21:00	1.0	1.0	0.8	1.2	0.7	0.8	1.1
21:00 - 22:00	0.7	0.8	0.9	0.6	0.7	0.8	0.8
22:00 - 23:00	1.0	0.9	0.8	0.7	0.7	0.8	0.7
23:00 - 00:00	1.0	0.7	1.0	0.8	0.8	0.8	0.6
00:00 - 01:00	0.5	0.8	0.9	0.5	0.8	0.8	0.7
01:00 - 02:00	0.6	0.6	1.0	0.4	0.7	0.6	0.7
02:00 - 03:00	0.8	0.8	0.8	0.5	0.6	0.8	0.8
03:00 - 04:00	0.5	0.8	0.9	0.6	0.7	0.7	0.9
04:00 - 05:00	0.6	0.9	0.8	0.9	0.8	1.0	0.9
05:00 - 06:00	0.8	0.8	0.8	0.8	0.8	1.1	0.7
06:00 - 07:00	1.4	0.9	0.9	1.0	0.8	1.0	0.8
07:00 - 08:00	0.8	0.8	0.8	1.3	0.8	0.8	0.5
08:00 - 09:00	0.7	0.9	0.8	0.6	0.5	0.5	0.7
Average-24Hr*	0.9	0.8	0.9	0.8	0.7	0.8	0.7
Max-1Hr	1.4	1.2	1.1	1.3	1.0	1.1	1.1
Min-1Hr	0.5	0.5	0.6	0.4	0.5	0.5	0.4
Standard-1Hr	30 ppm						
Standard-24Hr	-						

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


 (Miss Katesarin Vorradetwittaya)
 Environmental Scientist


 (Miss Preeda Somjai)
 Technical Management Team



Ambient Air Monitoring Results : Carbon monoxide

MTR-SPRC PLC-Refinery

Location : Map Ta Phut New Town

Monitor Period : 17-24 Mar 2026

Analyzer Model : API 300A

Station No : SS2-03

Serial No : 216292

Site Operator : Mr. Song Hengchwankun

Calibrator Model : Teledyne T700

Serial No : 1367

Calibration Gas Cylinder I.D.: EB0108319

Certified Date : 06 Jan 2026

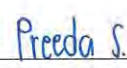
Cal Concentration (ppb) : 0,100,200,400

Expire Date : 05 Jan 2027

Time	CO Concentration (ppm)						
	17-18 Mar 2026	18-19 Mar 2026	19-20 Mar 2026	20-21 Mar 2026	21-22 Mar 2026	22-23 Mar 2026	23-24 Mar 2026
14:00 - 15:00	0.6	0.5	0.5	0.9	1.1	1.0	1.1
15:00 - 16:00	0.7	0.5	0.6	0.9	1.0	1.0	0.8
16:00 - 17:00	0.6	0.5	0.5	0.6	1.0	0.7	1.2
17:00 - 18:00	0.6	0.5	0.5	0.7	0.8	1.1	0.8
18:00 - 19:00	0.5	0.5	0.4	0.8	0.9	0.8	0.8
19:00 - 20:00	0.6	0.5	0.5	0.9	0.6	0.9	0.5
20:00 - 21:00	0.6	0.6	0.4	0.5	0.7	0.5	0.5
21:00 - 22:00	0.6	0.6	0.5	0.3	0.5	0.6	0.5
22:00 - 23:00	0.5	0.6	0.5	0.5	0.8	0.6	0.6
23:00 - 00:00	0.6	0.6	0.5	0.5	0.6	0.6	0.6
00:00 - 01:00	0.5	0.5	0.5	0.6	0.8	0.7	0.5
01:00 - 02:00	0.6	0.6	0.6	0.6	0.7	0.5	0.6
02:00 - 03:00	0.6	0.6	0.6	0.6	0.8	0.3	0.6
03:00 - 04:00	0.5	0.5	0.5	0.4	1.0	0.4	0.5
04:00 - 05:00	0.6	0.5	0.5	0.4	0.5	0.5	0.5
05:00 - 06:00	0.6	0.4	1.0	0.6	0.9	0.4	0.4
06:00 - 07:00	0.6	0.3	0.8	0.4	1.2	0.5	0.3
07:00 - 08:00	0.6	0.3	0.9	0.6	1.2	0.5	0.3
08:00 - 09:00	0.5	0.4	0.8	0.5	1.1	1.2	0.6
09:00 - 10:00	0.5	0.5	1.0	1.4	1.0	0.8	0.6
10:00 - 11:00	0.5	0.6	1.1	1.5	1.0	0.8	0.4
11:00 - 12:00	0.6	0.5	0.8	1.1	0.7	1.2	0.3
12:00 - 13:00	0.5	0.6	1.1	1.3	0.8	0.9	0.4
13:00 - 14:00	0.5	0.6	1.1	1.0	0.5	1.2	0.4
Average-24Hr*	0.6	0.5	0.7	0.7	0.8	0.7	0.6
Max-1Hr	0.7	0.6	1.1	1.5	1.2	1.2	1.2
Min-1Hr	0.5	0.3	0.4	0.3	0.5	0.3	0.3
Standard-1Hr	30 ppm						
Standard-24Hr	-						

Remark : * Average time between 14:00-14:00


 (Miss Katesarin Vorradetwittaya)
 Environmental Scientist


 (Miss Preeda Somjai)
 Technical Management Team



Ambient Air Monitoring Results : Carbon monoxide

MTR-SPRC PLC-Refinery

Location : Ban Plong Community

Monitor Period : 17-24 Mar 2026

Analyzer Model : Thermo 48C

Station No : SS2-02

Serial No : 68273-362

Site Operator : Mr. Song Hengchwankun

Calibrator Model : Teledyne T700

Serial No : 1367

Calibration Gas Cylinder I.D.: EB0108319

Certified Date : 06 Jan 2026

Cal Concentration (ppb) : 0,100,200,400

Expire Date : 05 Jan 2027

Time	CO Concentration (ppm)						
	17-18 Mar 2026	18-19 Mar 2026	19-20 Mar 2026	20-21 Mar 2026	21-22 Mar 2026	22-23 Mar 2026	23-24 Mar 2026
12:00 - 13:00	0.7	0.5	0.6	0.7	0.8	0.8	0.6
13:00 - 14:00	0.7	0.6	0.5	0.6	1.1	0.8	0.5
14:00 - 15:00	0.6	0.7	0.3	0.7	1.1	0.7	0.5
15:00 - 16:00	0.6	0.6	0.5	0.7	0.9	0.8	0.5
16:00 - 17:00	0.7	0.7	0.7	0.6	0.7	0.8	0.8
17:00 - 18:00	0.8	0.7	0.6	0.5	0.6	0.5	0.8
18:00 - 19:00	0.6	0.5	0.7	0.4	0.8	0.4	0.6
19:00 - 20:00	0.5	0.7	0.7	0.5	0.9	0.6	0.5
20:00 - 21:00	0.6	0.7	0.7	0.5	0.8	0.7	0.6
21:00 - 22:00	0.7	0.6	0.6	0.5	0.6	0.6	0.5
22:00 - 23:00	0.7	0.7	0.7	0.5	0.5	0.6	0.6
23:00 - 00:00	0.5	0.7	0.8	0.5	0.5	0.5	0.7
00:00 - 01:00	0.6	0.8	0.6	0.6	0.9	0.6	0.6
01:00 - 02:00	0.7	0.7	0.5	0.7	0.8	0.6	0.7
02:00 - 03:00	0.7	0.5	0.5	0.6	0.9	0.5	0.6
03:00 - 04:00	0.7	0.4	0.6	0.7	0.8	0.6	0.7
04:00 - 05:00	0.9	0.4	0.7	0.8	0.6	0.6	0.7
05:00 - 06:00	0.7	0.4	0.7	0.6	0.7	0.5	0.5
06:00 - 07:00	0.6	0.4	0.6	0.8	0.8	0.5	0.6
07:00 - 08:00	0.5	0.4	0.6	0.8	0.6	0.8	0.5
08:00 - 09:00	0.7	0.6	0.6	0.8	0.5	0.8	0.5
09:00 - 10:00	0.7	0.9	0.7	0.8	0.5	0.6	0.5
10:00 - 11:00	0.5	0.7	0.5	0.6	0.6	0.5	0.6
11:00 - 12:00	0.5	0.6	0.6	0.6	0.7	0.5	0.7
Average-24Hr*	0.6	0.6	0.6	0.6	0.7	0.6	0.6
Max-1Hr	0.9	0.9	0.8	0.8	1.1	0.8	0.8
Min-1Hr	0.5	0.4	0.3	0.4	0.5	0.4	0.5
Standard-1Hr	30 ppm						
Standard-24Hr	-						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REF. NO.	: 226003-Amb-2603-0101
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: -
SAMPLING DATE	: 17-24/03/2026	RECEIVED DATE	: 30/03/2026
ANALYTICAL DATE	: 01-04/04/2026	REPORT DATE	: 06/04/2026
SITE OPERATOR	: Mr. Song Hengchawankul	REGISTRATION NO.	: -
INSTRUMENT	: High Volume Air Sampler	SAMPLE CONDITION	: Normal
STATION DESCRIPTION	: 1. Within the Refinery Plant 2. Map Ta Phut New Town 3. Ban Plong Community		

PARAMETER	SAMPLING DATE	UNITS	RESULTS			STANDARD ⁽¹⁾	REFERENCE METHODS
			1	2	3		
TSP (24 hr.)	17-18/03/2026	µg/m ³	25.0	27.1	18.8	200	High Volume Air Sampler/
	18-19/03/2026	µg/m ³	24.3	31.5	29.9		Gravimetric Method
	19-20/03/2026	µg/m ³	34.7	27.7	30.0		
	20-21/03/2026	µg/m ³	29.6	28.6	23.2		
	21-22/03/2026	µg/m ³	26.7	28.6	27.4		
	22-23/03/2026	µg/m ³	26.5	28.3	23.7		
	23-24/03/2026	µg/m ³	27.0	26.0	27.3		

(Miss Pornnapa Budthum)

Analyst

(Miss Narisa Poowasanpetch)

Technical Management Team

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3. ⁽¹⁾ Notification of the National Environment Board on the Establishment of Ambient Air Quality Standard, B.E. 2569 (2026).



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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REF. NO.	: 226003-Amb-2603-0101
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: -
SAMPLING DATE	: 17-24/03/2026	RECEIVED DATE	: 30/03/2026
ANALYTICAL DATE	: 01-04/04/2026	REPORT DATE	: 06/04/2026
SITE OPERATOR	: Mr. Song Hengchawankul	REGISTRATION NO.	: -
INSTRUMENT	: High Volume Air Sampler (Hi-Vol PM-10 Size Selective Inlet)	SAMPLE CONDITION	: Normal

STATION DESCRIPTION : 1. Within the Refinery Plant
2. Map Ta Phut New Town
3. Ban Plong Community

PARAMETER	SAMPLING DATE	UNITS	RESULTS			STANDARD ⁽¹⁾	REFERENCE METHODS
			1	2	3		
PM-10 (24 hr.)	17-18/03/2026	µg/m ³	17.3	11.8	14.3	100	High Volume Air Sampler
	18-19/03/2026	µg/m ³	16.5	14.7	14.7		(Hi-Vol PM-10
	19-20/03/2026	µg/m ³	14.5	19.2	14.6		Size Selective Inlet)/
	20-21/03/2026	µg/m ³	17.8	16.0	14.3		Gravimetric Method
	21-22/03/2026	µg/m ³	16.6	14.9	15.7		
	22-23/03/2026	µg/m ³	15.9	12.2	16.5		
	23-24/03/2026	µg/m ³	14.8	11.6	13.9		

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Analyst

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-Amb-2603-0101
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: -
SAMPLING DATE	: 19-21/03/2026	RECEIVE DATE	: 30/03/2026
ANALYTICAL DATE	: 03/04/2026	REPORT DATE	: 09/04/2026
SITE OPERATOR	: Mr. Song Hengchawankul	REGISTRATION NO.	: -
SAMPLE CONDITION	: Normal	INSTRUMENT	: Impingment Absorption
CALIBRATOR MODEL	: Defender 520-H	SERIAL NO.	: 114069
STATION DESCRIPTION	: 1. Within the Refinery Plant 2. Map Ta Phut New Town 3. Ban Plong Community		

PARAMETER	SAMPLING DATE	UNIT	ND (Non-detectable)	RESULTS			REFERENCE METHODS
				1	2	3	
Hydrogen Sulfide	19/03/2026	ppm	<0.001	ND	ND	ND	Intersociety Committee
	20/03/2026	ppm	<0.001	ND	ND	ND	Method 701
	21/03/2026	ppm	<0.001	ND	ND	ND	


(Miss Pornnapa Budthum)
Analyst


(Miss Narisa Poowasanpetch)
Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0028/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 06-07/01/2026	ANALYTICAL DATE	: 10/01/2026
SAMPLING TIME	: 12:13-12:30	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 08/01/2026	FILE CODE	: 226003_TO-15_January
REPORT DATE	: 12/01/2026		

Compound	SAMPLING LOCATION				STANDARD* (µg/m ³)
	Non Detection		Muangmai Map Ta Phut Community		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	0.45	1.44	7.6

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0247/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 10-11/02/2026	ANALYTICAL DATE	: 14-17/02/2026
SAMPLING TIME	: 11:10-11:35	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 12/02/2026	FILE CODE	: 226003_TO-15_February
REPORT DATE	: 20/02/2026		

Compound	SAMPLING LOCATION				STANDARD* ($\mu\text{g}/\text{m}^3$)
	Non Detection		Muangmai Map Ta Phut Community		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	0.68	2.17	7.6

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0438/69
SAMPLING BY	: SECOT Co., Ltd .	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 10-11/03/2026	ANALYTICAL DATE	: 13,17/03/2026
SAMPLING TIME	: 11:25-11:30	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 12/03/2026	FILE CODE	: 226003_TO-15_March
REPORT DATE	: 18/03/2026		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* (µg/m ³)
	Map Ta Phut New Town				
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	0.45	1.44	7.6

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsanga

(Miss Siriwan Chimsa-nga)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0569,0573/69
SAMPLING BY	: SECOT Co., Ltd .	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 04-05/04/2026	ANALYTICAL DATE	: 07-08/04/2026
SAMPLING TIME	: 11:31-11:52	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 06/04/2026	FILE CODE	: 226003_TO-15_April
REPORT DATE	: 09/04/2026		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* ($\mu\text{g}/\text{m}^3$)
			Map Ta Phut New Town		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	0.28	0.89	7.6

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0827,0822/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 12-13/05/2026	ANALYTICAL DATE	: 15/05/2026
SAMPLING TIME	: 10:48-10:47	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 14/05/2026	FILE CODE	: 226003_TO-15_May
REPORT DATE	: 16/05/2026		

Compound	SAMPLING LOCATION				STANDARD* (µg/m ³)
	Non Detection		Map Ta Phut New Town		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	0.39	1.25	7.6

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 1072/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 23-24/06/2026	ANALYTICAL DATE	: 30/06/2026
SAMPLING TIME	: 13:48-13:41	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 25/06/2026	FILE CODE	: 226003_TO-15_June
REPORT DATE	: 01/07/2026		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* (µg/m ³)
			Map Ta Phut New Town		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	2.47	7.89	7.6

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0028/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 06-07/01/2026	ANALYTICAL DATE	: 10/01/2026
SAMPLING TIME	: 10:40-10:35	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 08/01/2026	FILE CODE	: 226003_TO-15_January
REPORT DATE	: 12/01/2026		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* ($\mu\text{g}/\text{m}^3$)
			Ban Plong Community		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	0.63	2.01	7.6

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0247/69
SAMPLING BY	: SECOT Co., Ltd .	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 10-11/02/2026	ANALYTICAL DATE	: 14-17/02/2026
SAMPLING TIME	: 10:58-10:20	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 12/02/2026	FILE CODE	: 226003_TO-15_February
REPORT DATE	: 20/02/2026		

Compound	SAMPLING LOCATION				STANDARD* (µg/m ³)
	Non Detection		Ban Plong Community		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	0.90	2.88	7.6

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-ngu

(Miss Siriwan Chimsa-ngu)

Technical Management Team

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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).



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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	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0438/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 10-11/03/2026	ANALYTICAL DATE	: 13,17/03/2026
SAMPLING TIME	: 11:00-10:55	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 12/03/2026	FILE CODE	: 226003_TO-15_March
REPORT DATE	: 18/03/2026		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* (µg/m ³)
			Ban Plong Community		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	0.45	1.44	7.6

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

Jutarat Jaemruen

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0569.0573/69
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 04-05/04/2026	ANALYTICAL DATE	: 07-08/04/2026
SAMPLING TIME	: 11:30-10:40	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 06/04/2026	FILE CODE	: 226003_TO-15_April
REPORT DATE	: 09/04/2026		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* ($\mu\text{g}/\text{m}^3$)
			Ban Plong Community		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
Benzene	0.004	0.013	0.47	1.50	7.6

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-nga

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0827.0822/69
SAMPLING BY	: SECOT Co., Ltd .	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 12-13/05/2026	ANALYTICAL DATE	: 15/05/2026
SAMPLING TIME	: 11:46-11:59	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 14/05/2026	FILE CODE	: 226003_TO-15_May
REPORT DATE	: 16/05/2026		

Compound	SAMPLING LOCATION				STANDARD* (µg/m ³)
	Non Detection		Ban Plong Community		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	0.64	2.04	7.6

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-nga

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 1072/69
SAMPLING BY	: SECOT Co., Ltd .	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 23-24/06/2026	ANALYTICAL DATE	: 30/06/2026
SAMPLING TIME	: 13:32-12:32	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 25/06/2026	FILE CODE	: 226003_TO-15_June
REPORT DATE	: 01/07/2026		

Compound	SAMPLING LOCATION				STANDARD* (µg/m ³)
	Non Detection		Ban Plong Community		
	ppbv	µg/m ³	ppbv	µg/m ³	
Benzene	0.004	0.013	0.60	1.92	7.6

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-STK-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: ๖-239
SAMPLING DATE	: 20/03/2026	SAMPLING TIME	: 09.45-11.45 a.m.
RECEIVED DATE	: 24/03/2026	ANALYTICAL DATE	: 24/03/2026-01/04/2026
REPORT DATE	: 04/04/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: ๖-239-๖-0024
STACK LOCATION	: RFCCU Stack (UTM : 734010E, 1405310N)		

STACK DESCRIPTION

Height	: 74	m	Flow Rate ⁽¹⁾	: 3,622	Ncu.m/min
Diameter	: 3.2	m	Excess Oxygen	: 3.17	%
Temperature	: 269.33	°C	Moisture Content	: 10.53	%
Gas Velocity	: 15.33	m/s			

PARAMETER	RESULTS ⁽¹⁾		EIA ⁽²⁾ / STANDARD ⁽³⁾	EMISSION RATE		REFERENCE METHOD
	mg/Ncu.m		mg/Ncu.m	g/s		
	3.17%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Mercury (Hg)	ND (<0.0003)	ND (<0.0003)	2.4/2.4	<0.00002	0.270	US. EPA Method 29
Lead (Pb)	0.04	0.03	5.0/5.0	0.002	0.560	US. EPA Method 29

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG.NO.๖-239-๖-0022

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.๖-239-๖-0010

- Remark :**
1. Reported analysis refers to submitted sample only.
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 3. ⁽¹⁾ At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.
 4. ⁽²⁾ Assigned value in the Report on Revision the Project Description in the EIA Report (No.12) of Refinery Plant, B.E. 2567 (2024).
 5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).
 6. ND (Non-Detectable) means the lowest value that can be detected by the analyzer.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-STK-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: ๗-239
SAMPLING DATE	: 20/03/2026	SAMPLING TIME	: 09.45-11.45 a.m.
RECEIVED DATE	: 24/03/2026	ANALYTICAL DATE	: 24-27/03/2026
REPORT DATE	: 30/03/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: ๗-239-๓-0024
STACK LOCATION	: RFCCU Stack (UTM : 734010E, 1405310N)		
STACK DESCRIPTION			

Height	: 73.8	m	Flow Rate ⁽¹⁾	: 3,622	Ncu.m/min
Diameter	: 3.2	m	Excess Oxygen	: 3.17	%
Temperature	: 269.33	°C	Moisture Content	: 10.53	%
Gas Velocity	: 15.33	m/s			

PARAMETER	RESULTS ⁽¹⁾		EIA ⁽²⁾ / STANDARD ⁽³⁾	EMISSION RATE		REFERENCE METHOD
	mg/Ncu.m		mg/Ncu.m	g/s		
	3.17%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Particulate Matter (PM)	80.60	63.19	240/320	4.865	22.200	US. EPA Method 5



(Miss Pornnapa Budthum)

Analyst

REG.NO.๗-239-๓-0018



(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.๗-239-๓-0010

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-CEMS-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: ๓-239
SAMPLING DATE	: 20/03/2026	SAMPLING TIME	: 09.45-11.45 a.m.
RECEIVED DATE	: 30/03/2026	ANALYTICAL DATE	: 31/03/2026-11/05/2026
REPORT DATE	: 11/05/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: ๓-239-0024
STACK LOCATION	: RFCCU Stack (UTM : 734010E, 1405310N)		

STACK DESCRIPTION

Height	: 73.8	m	Flow Rate ⁽¹⁾	: 3,622	Ncu.m/min
Diameter	: 3.2	m	Excess Oxygen	: 3.17	%
Temperature	: 269.33	°C	Moisture Content	: 10.53	%
Gas Velocity	: 15.33	m/s			

PARAMETER	RESULT ⁽¹⁾				EIA ⁽²⁾ / STANDARD ⁽³⁾		EMISSION RATE		REFERENCE METHOD
	ppm		mg/Neu.m.		ppm	mg/Neu.m.	g/s		
	3.17%O ₂	7%O ₂	3.17%O ₂	7%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Sulfur Dioxide (SO ₂)	703.05	551.18	1,840.29	1,442.76	700/700	1,832/1,832	111.078	149.000	US. EPA Method 6C
Oxide of Nitrogen (NO _x)	189.06	148.22	355.70	278.86	250/400	113 / 226	21.469	23.010	US. EPA Method 7E
Carbon Monoxide (CO)	70.21	55.04	80.40	63.03	554/690	634/790	4.853	24.320	US. EPA Method 10

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. ๓-239-๓-0006

(Miss Preeda Somjai)

Technical Management Team

REG.NO. ๓-239-๓-0006

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**The Monitoring Result of Emission Concentration
RFCCU
Star Petroleum Refining Public Co., Ltd.
March 20, 2026**

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	3.22	3.18	188.03	188.29	147.70
2	3.25	3.21	188.17	188.43	148.06
3	3.16	3.12	190.22	190.47	148.91
Average	3.21	3.17	188.81	189.06	148.22

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	3.22	3.18	695.25	695.66	545.69
2	3.25	3.21	711.99	712.46	559.82
3	3.16	3.12	700.51	701.03	548.05
Average	3.21	3.17	702.58	703.05	551.18

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	3.22	3.18	71.90	71.93	56.42
2	3.25	3.21	70.45	70.49	55.39
3	3.16	3.12	68.16	68.20	53.32
Average	3.21	3.17	70.17	70.21	55.04



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Run # : 1

Date: March 20, 2026

Location : RFCCU

Start time: 10:20 AM

Finish time : 10:40 AM

O₂ instrument Model: AMI 70

Serial No.: 161212-13

NO_x instrument Model: TELEDYNE 200 EM

Serial No.: 435

SO₂ instrument Model: API 100 AH

Serial No.: 0060

CO instrument Model: THERMO 48 C

Serial No.: 78253-388

Fuel Type : Fuel Gas

Test Operator : Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
10:20 AM	3.24	185.52	689.53	71.32
10:21 AM	3.17	185.86	696.85	75.63
10:22 AM	3.19	187.24	704.56	78.16
10:23 AM	3.16	187.22	702.31	79.63
10:24 AM	3.15	187.58	688.88	79.23
10:25 AM	3.12	188.53	684.42	78.16
10:26 AM	3.09	188.70	677.31	76.90
10:27 AM	3.14	188.80	679.76	73.69
10:28 AM	3.17	189.09	679.18	69.97
10:29 AM	3.17	188.66	678.00	69.32
10:30 AM	3.28	188.60	689.91	68.49
10:31 AM	3.29	188.36	688.78	66.46
10:32 AM	3.33	188.54	700.83	68.40
10:33 AM	3.28	188.95	708.54	72.42
10:34 AM	3.30	188.48	692.42	72.00
10:35 AM	3.25	188.22	700.26	71.58
10:36 AM	3.22	187.78	709.91	70.32
10:37 AM	3.23	188.15	718.24	68.32
10:38 AM	3.23	188.42	697.91	66.38
10:39 AM	3.29	188.07	695.08	66.80
10:40 AM	3.34	187.90	717.56	66.80
Average	3.22	188.03	695.25	71.90

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 20, 2026	Run # :	2
Start time:	10:41 AM	Location :	RFCCU
O ₂ instrument Model:	AMI 70	Finish time :	11:01 AM
NO _x instrument Model:	TELEDYNE 200 EM	Serial No.:	161212-13
SO ₂ instrument Model:	API 100 AH	Serial No.:	435
CO instrument Model:	THERMO 48 C	Serial No.:	0060
Fuel Type :	Fuel Gas	Serial No.:	78253-388
		Test Operator :	Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
10:41 AM	3.33	188.16	707.38	66.55
10:42 AM	3.27	187.74	705.76	66.47
10:43 AM	3.24	187.89	734.27	68.07
10:44 AM	3.25	189.36	728.85	70.48
10:45 AM	3.28	189.59	700.93	70.40
10:46 AM	3.20	189.01	709.25	72.01
10:47 AM	3.20	189.48	729.49	73.79
10:48 AM	3.21	189.90	724.91	76.49
10:49 AM	3.26	189.74	701.07	74.46
10:50 AM	3.26	189.17	712.44	72.01
10:51 AM	3.24	188.60	721.99	70.90
10:52 AM	3.19	188.92	735.89	73.95
10:53 AM	3.20	189.64	720.47	72.94
10:54 AM	3.19	188.95	693.78	71.08
10:55 AM	3.24	188.15	692.42	69.16
10:56 AM	3.27	186.71	708.48	68.74
10:57 AM	3.25	184.29	708.26	66.21
10:58 AM	3.28	184.34	716.63	65.63
10:59 AM	3.26	186.12	721.94	68.33
11:00 AM	3.28	187.35	660.80	70.33
11:01 AM	3.28	188.51	716.71	71.50
Average	3.25	188.17	711.99	70.45

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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

Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 20, 2026	Run # :	3
Start time:	11:02 AM	Location :	RFCCU
O ₂ instrument Model:	AMI 70	Finish time :	11:22 AM
NO _x instrument Model:	TELEDYNE 200 EM	Serial No.:	161212-13
SO ₂ instrument Model:	API 100 AH	Serial No.:	435
CO instrument Model:	THERMO 48 C	Serial No.:	0060
Fuel Type :	Fuel Gas	Serial No.:	78253-388
		Test Operator :	Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
11:02 AM	3.22	188.78	708.42	71.07
11:03 AM	3.20	189.20	708.88	68.67
11:04 AM	3.16	189.24	700.35	69.16
11:05 AM	3.15	189.03	685.80	70.31
11:06 AM	3.16	189.31	716.02	70.14
11:07 AM	3.12	189.82	722.15	69.07
11:08 AM	3.12	190.04	694.71	68.67
11:09 AM	3.08	190.45	691.09	66.13
11:10 AM	3.10	190.04	690.67	66.05
11:11 AM	3.11	190.17	696.49	65.29
11:12 AM	3.15	191.02	713.83	65.80
11:13 AM	3.16	191.88	706.93	67.40
11:14 AM	3.14	191.76	689.62	68.99
11:15 AM	3.15	191.13	686.48	68.74
11:16 AM	3.14	190.05	696.93	68.08
11:17 AM	3.18	189.69	707.91	68.59
11:18 AM	3.16	190.64	699.18	67.23
11:19 AM	3.13	190.89	704.24	67.06
11:20 AM	3.18	190.37	699.05	67.32
11:21 AM	3.19	190.35	694.84	67.91
11:22 AM	3.26	190.76	697.09	69.58
Average	3.16	190.22	700.51	68.16

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-STK-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: ๓-239
SAMPLING DATE	: 12/03/2026	SAMPLING TIME	: 03.45-04.45 p.m.
RECEIVED DATE	: 24/03/2026	ANALYTICAL DATE	: 24-27/03/2026
REPORT DATE	: 30/03/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: ๓-239-๓-0024
STACK LOCATION	: CDU Stack (UTM : 734410E, 1405100N)		
STACK DESCRIPTION			

Height	: 63.2	m	Flow Rate ⁽¹⁾	: 2,291	Ncu.m/min
Diameter	: 3.0	m	Excess Oxygen	: 4.72	%
Temperature	: 194.83	°C	Moisture Content	: 10.77	%
Gas Velocity	: 9.58	m/s			

PARAMETER	RESULTS ⁽¹⁾		EIA ⁽²⁾ / STANDARD ⁽³⁾	EMISSION RATE		REFERENCE METHOD
	mg/Ncu.m		mg/Ncu.m	g/s		
	4.72%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Particulate Matter (PM)	2.49	2.14	60/60	0.095	0.510	US. EPA Method 5

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG.NO.๓-239-๓-0018

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.๓-239-๓-0010

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. ⁽¹⁾ At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.
 4. ⁽²⁾ Assigned value in the Report on Revision the Project Description in the EIA Report (No.12) of Refinery Plant, B.E. 2567 (2024).
 5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-CEMS-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: ๓-239
SAMPLING DATE	: 12/03/2026	SAMPLING TIME	: 03.45-04.55 p.m.
RECEIVED DATE	: 30/03/2026	ANALYTICAL DATE	: 31/03/2026-11/05/2026
REPORT DATE	: 11/05/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: ๓-239-0024
STACK LOCATION	: CDU Stack (UTM : 734410E, 1405100N)		
STACK DESCRIPTION			

Height	: 63.2	m	Flow Rate ⁽¹⁾	: 2,291	Ncu.m/min
Diameter	: 3.0	m	Excess Oxygen	: 4.72	%
Temperature	: 194.83	°C	Moisture Content	: 10.77	%
Gas Velocity	: 9.58	m/s			

PARAMETER	RESULT ⁽¹⁾				EIA ⁽²⁾ / STANDARD ⁽³⁾		EMISSION RATE		REFERENCE METHOD
	ppm		mg/Ncu.m.		ppm	mg/Ncu.m.	g/s		
	4.72%O ₂	7%O ₂	4.72%O ₂	7%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Sulfur Dioxide (SO ₂)	3.36	2.88	8.80	7.54	60/60	157/157	0.336	1.820	US. EPA Method 6C
Oxide of Nitrogen (NO _x)	23.51	20.19	44.23	37.99	25/200	47/376	1.689	2.000	US. EPA Method 7E
Carbon Monoxide (CO)	1.57	1.35	1.80	1.55	100/690	115/790	0.069	0.500	US. EPA Method 10


(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. ๓-239-๓-0006



(Miss Preeda Somjai)

Technical Management Team

REG.NO. ๓-239-๓-0006

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5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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The Monitoring Result of Emission Concentration CDU

Star Petroleum Refining Public Co., Ltd.

March 12, 2026

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	4.88	4.79	23.93	24.03	20.73
2	4.78	4.69	23.15	23.23	19.92
3	4.76	4.68	23.18	23.26	19.93
Average	4.81	4.72	23.42	23.51	20.19

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	4.88	4.79	2.87	2.83	2.44
2	4.78	4.69	3.60	3.56	3.05
3	4.76	4.68	3.72	3.68	3.15
Average	4.81	4.72	3.40	3.36	2.88

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	4.88	4.79	1.54	1.50	1.29
2	4.78	4.69	1.64	1.60	1.37
3	4.76	4.68	1.64	1.60	1.37
Average	4.81	4.72	1.61	1.57	1.35



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 12, 2026	Run # :	1
Start time:	3:50 PM	Location :	CDU
O ₂ instrument Model:	AMI 70	Finish time :	4:10 PM
NO _x instrument Model:	TELEDYNE 200 EM	Serial No.:	161212-13
SO ₂ instrument Model:	TELEDYNE 100 EH	Serial No.:	433
CO instrument Model:	API 300 A	Serial No.:	186
Fuel Type :	Natural Gas	Serial No.:	1070
		Test Operator :	Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
3:50 PM	4.73	23.75	3.22	1.36
3:51 PM	4.72	23.92	3.22	1.36
3:52 PM	4.74	24.08	3.23	1.36
3:53 PM	4.79	24.04	3.28	1.36
3:54 PM	4.81	23.90	2.51	1.36
3:55 PM	4.91	23.93	2.43	1.36
3:56 PM	4.96	24.11	2.49	1.35
3:57 PM	4.97	24.13	2.51	1.52
3:58 PM	4.94	24.08	2.60	1.62
3:59 PM	4.92	24.19	2.71	1.64
4:00 PM	4.90	24.27	2.74	1.64
4:01 PM	4.93	24.15	2.77	1.64
4:02 PM	4.90	24.13	2.82	1.64
4:03 PM	4.96	24.15	2.85	1.64
4:04 PM	4.88	23.96	2.88	1.64
4:05 PM	4.89	23.96	2.87	1.65
4:06 PM	4.92	23.98	2.92	1.65
4:07 PM	4.89	23.91	2.95	1.65
4:08 PM	4.90	23.48	3.03	1.65
4:09 PM	4.94	23.16	3.09	1.65
4:10 PM	4.90	23.18	3.13	1.65
Average	4.88	23.93	2.87	1.54

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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

Star Petroleum Refining Public Co., Ltd. Emission Test Result

Run # : 2

Date: March 12, 2026

Location : CDU

Start time: 4:11 PM

Finish time: 4:31 PM

O₂ instrument Model: AMI 70

Serial No.: 161212-13

NO_x instrument Model: TELEDYNE 200 EM

Serial No.: 433

SO₂ instrument Model: TELEDYNE 100 EH

Serial No.: 186

CO instrument Model: API 300 A

Serial No.: 1070

Fuel Type : Natural Gas

Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
4:11 PM	4.68	23.27	3.23	1.65
4:12 PM	4.71	23.27	3.26	1.65
4:13 PM	4.80	23.40	3.42	1.65
4:14 PM	4.77	23.23	3.50	1.64
4:15 PM	4.77	23.11	3.53	1.64
4:16 PM	4.73	22.98	3.54	1.64
4:17 PM	4.74	22.84	3.53	1.64
4:18 PM	4.78	22.97	3.62	1.64
4:19 PM	4.76	23.33	3.62	1.64
4:20 PM	4.82	23.32	3.68	1.64
4:21 PM	4.75	23.31	3.67	1.64
4:22 PM	4.83	23.20	3.67	1.64
4:23 PM	4.85	23.21	3.78	1.64
4:24 PM	4.83	23.20	3.82	1.64
4:25 PM	4.78	23.15	3.74	1.64
4:26 PM	4.84	23.19	3.65	1.64
4:27 PM	4.86	23.05	3.59	1.64
4:28 PM	4.87	22.95	3.62	1.64
4:29 PM	4.77	23.07	3.72	1.64
4:30 PM	4.74	23.09	3.78	1.64
4:31 PM	4.77	23.04	3.70	1.64
Average	4.78	23.15	3.60	1.64

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 12, 2026	Run # :	3
Start time:	4:32 PM	Location :	CDU
O ₂ instrument Model:	AMI 70	Finish time :	4:52 PM
NO _x instrument Model:	TELEDYNE 200 EM	Serial No.:	161212-13
SO ₂ instrument Model:	TELEDYNE 100 EH	Serial No.:	433
CO instrument Model:	API 300 A	Serial No.:	186
Fuel Type :	Natural Gas	Serial No.:	1070
		Test Operator :	Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
4:32 PM	4.70	23.12	3.67	1.64
4:33 PM	4.75	23.39	3.73	1.64
4:34 PM	4.76	23.33	3.81	1.64
4:35 PM	4.74	23.21	3.83	1.64
4:36 PM	4.70	23.24	3.81	1.64
4:37 PM	4.67	23.22	3.84	1.64
4:38 PM	4.70	23.34	3.80	1.64
4:39 PM	4.76	23.38	3.81	1.64
4:40 PM	4.74	23.23	3.78	1.64
4:41 PM	4.83	23.05	3.82	1.64
4:42 PM	4.86	22.87	3.83	1.64
4:43 PM	4.73	22.92	3.70	1.64
4:44 PM	4.71	23.09	3.68	1.64
4:45 PM	4.78	23.28	3.70	1.64
4:46 PM	4.81	23.21	3.62	1.64
4:47 PM	4.71	23.10	3.58	1.64
4:48 PM	4.86	23.11	3.63	1.64
4:49 PM	4.84	23.28	3.65	1.64
4:50 PM	4.90	23.19	3.61	1.64
4:51 PM	4.72	23.05	3.65	1.64
4:52 PM	4.72	23.14	3.52	1.64
Average	4.76	23.18	3.72	1.64

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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

STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-STK-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: ๓-239
SAMPLING DATE	: 18/03/2026	SAMPLING TIME	: 11.10 a.m.-00.10 p.m.
RECEIVED DATE	: 24/03/2026	ANALYTICAL DATE	: 24-27/03/2026
REPORT DATE	: 30/03/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: ๓-239-๓-0024
STACK LOCATION	: VDU Stack (UTM : 734360E, 1405125N)		
STACK DESCRIPTION			

Height	: 54	m	Flow Rate ⁽¹⁾	: 1,574	Ncu.m/min
Diameter	: 2.0	m	Excess Oxygen	: 4.25	%
Temperature	: 191.25	°C	Moisture Content	: 10.64	%
Gas Velocity	: 14.66	m/s			

PARAMETER	RESULTS ⁽¹⁾		EIA ⁽²⁾ / STANDARD ⁽³⁾	EMISSION RATE		REFERENCE METHOD
	mg/Ncu.m		mg/Ncu.m	g/s		
	4.25%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Particulate Matter (PM)	2.25	1.88	60/60	0.059	0.200	US. EPA Method 5

(Miss Pornnapa Budthum)

Analyst

REG.NO.๓-239-๓-0018

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.๓-239-๓-0010

- Remark :**
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 5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-CEMS-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: ฏ-239
SAMPLING DATE	: 18/03/2026	SAMPLING TIME	: 11.10 a.m.-00.35 p.m.
RECEIVED DATE	: 30/03/2026	ANALYTICAL DATE	: 31/03/2026-11/05/2026
REPORT DATE	: 11/05/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: ฏ-239-0024
STACK LOCATION	: VDU Stack (UTM : 734360E, 1405125N)		

STACK DESCRIPTION

Height	: 54	m	Flow Rate ⁽¹⁾	: 1,574	Ncu.m/min
Diameter	: 2.0	m	Excess Oxygen	: 4.25	%
Temperature	: 191.25	°C	Moisture Content	: 10.64	%
Gas Velocity	: 14.66	m/s			

PARAMETER	RESULT ⁽¹⁾				EIA ⁽²⁾ / STANDARD ⁽³⁾		EMISSION RATE		REFERENCE METHOD
	ppm		mg/Ncu.m.		ppm	mg/Ncu.m.	g/s		
	4.25%O ₂	7%O ₂	4.25%O ₂	7%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Sulfur Dioxide (SO ₂)	3.72	3.11	9.74	8.14	60/60	157/157	0.255	1.510	US. EPA Method 6C
Oxide of Nitrogen (NO _x)	18.20	15.20	34.24	28.60	25/200	47/376	0.898	0.900	US. EPA Method 7E
Carbon Monoxide (CO)	3.81	3.18	4.36	3.64	100/690	115/790	0.114	0.500	US. EPA Method 10

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. ฏ-239-จ-0006

(Miss Preeda Somjai)

Technical Management Team

REG.NO. ฏ-239-ก-0006

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The Monitoring Result of Emission Concentration VDU

Star Petroleum Refining Public Co., Ltd.

March 18, 2026

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	4.34	4.30	18.49	18.47	15.47
2	4.28	4.25	18.08	18.06	15.08
3	4.24	4.21	18.10	18.07	15.05
Average	4.29	4.25	18.22	18.20	15.20

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	4.34	4.30	3.51	3.46	2.90
2	4.28	4.25	3.77	3.72	3.11
3	4.24	4.21	4.04	3.99	3.32
Average	4.29	4.25	3.78	3.72	3.11

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	4.34	4.30	3.83	3.76	3.15
2	4.28	4.25	3.87	3.81	3.18
3	4.24	4.21	3.92	3.86	3.21
Average	4.29	4.25	3.88	3.81	3.18



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

Star Petroleum Refining Public Co., Ltd. Emission Test Result

Run # : 1

Date: March 18, 2026

Location : VDU

Start time: 11:30 AM

Finish time: 11:50 AM

O₂ instrument Model: AMI 70

Serial No.: 121121-10

NO_x instrument Model: TELEDYNE 200 EM

Serial No.: 433

SO₂ instrument Model: API 100 AH

Serial No.: 118

CO instrument Model: THERMO 48 C

Serial No.: 0412106049

Fuel Type : Natural Gas

Test Operator : Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
11:30 AM	4.35	18.69	3.13	3.79
11:31 AM	4.33	18.72	3.22	3.89
11:32 AM	4.31	18.71	3.29	3.84
11:33 AM	4.31	18.69	3.32	3.84
11:34 AM	4.36	18.62	3.38	3.92
11:35 AM	4.36	18.60	3.43	3.87
11:36 AM	4.38	18.54	3.55	3.80
11:37 AM	4.40	18.55	3.62	3.90
11:38 AM	4.36	18.57	3.68	3.91
11:39 AM	4.35	18.54	3.69	3.87
11:40 AM	4.38	18.50	3.66	3.87
11:41 AM	4.40	18.49	3.63	3.86
11:42 AM	4.40	18.51	3.51	3.77
11:43 AM	4.37	18.48	3.53	3.69
11:44 AM	4.32	18.45	3.52	3.67
11:45 AM	4.29	18.37	3.59	3.77
11:46 AM	4.29	18.32	3.57	3.82
11:47 AM	4.31	18.27	3.58	3.84
11:48 AM	4.31	18.25	3.64	3.79
11:49 AM	4.30	18.23	3.60	3.82
11:50 AM	4.27	18.20	3.65	3.85
Average	4.34	18.49	3.51	3.83

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 18, 2026	Run # :	2
Start time:	11:51 AM	Location :	VDU
O ₂ instrument Model:	AMI 70	Finish time :	12:11 PM
NO _x instrument Model:	TELEDYNE 200 EM	Serial No.:	121121-10
SO ₂ instrument Model:	API 100 AH	Serial No.:	433
CO instrument Model:	THERMO 48 C	Serial No.:	118
Fuel Type :	Natural Gas	Serial No.:	0412106049
		Test Operator :	Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
11:51 AM	4.29	18.20	3.63	3.77
11:52 AM	4.34	18.16	3.58	3.90
11:53 AM	4.32	18.20	3.58	3.84
11:54 AM	4.30	18.19	3.65	3.89
11:55 AM	4.28	18.12	3.70	3.85
11:56 AM	4.24	18.01	3.73	3.85
11:57 AM	4.27	17.94	3.80	3.85
11:58 AM	4.26	17.97	3.73	3.87
11:59 AM	4.22	18.01	3.78	3.89
12:00 PM	4.23	18.00	3.83	3.87
12:01 PM	4.29	18.01	3.84	3.84
12:02 PM	4.31	18.05	3.77	3.89
12:03 PM	4.32	18.12	3.75	3.87
12:04 PM	4.29	18.13	3.83	3.87
12:05 PM	4.30	18.08	3.81	3.87
12:06 PM	4.30	18.05	3.78	3.94
12:07 PM	4.31	18.08	3.89	3.87
12:08 PM	4.30	18.11	3.86	3.88
12:09 PM	4.27	18.09	3.87	3.85
12:10 PM	4.25	18.10	3.93	3.92
12:11 PM	4.25	18.12	3.93	3.95
Average	4.28	18.08	3.77	3.87

Signature

Miss Katesarin Vorradetwittaya

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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 18, 2026	Run # :	3
Start time:	12:12 PM	Location :	VDU
O ₂ instrument Model:	AMI 70	Finish time :	12:32 PM
NO _x instrument Model:	TELEDYNE 200 EM	Serial No.:	121121-10
SO ₂ instrument Model:	API 100 AH	Serial No.:	433
CO instrument Model:	THERMO 48 C	Serial No.:	118
Fuel Type :	Natural Gas	Serial No.:	0412106049
		Test Operator :	Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
12:12 PM	4.25	18.10	3.95	3.90
12:13 PM	4.27	18.08	3.85	3.95
12:14 PM	4.25	18.05	3.91	3.95
12:15 PM	4.23	18.01	4.00	3.97
12:16 PM	4.21	17.96	4.01	3.93
12:17 PM	4.21	17.98	4.03	3.90
12:18 PM	4.25	17.98	4.03	3.97
12:19 PM	4.31	17.95	4.01	3.93
12:20 PM	4.30	18.07	4.01	3.92
12:21 PM	4.22	18.22	4.09	3.90
12:22 PM	4.22	18.19	4.15	3.93
12:23 PM	4.20	18.12	4.09	3.90
12:24 PM	4.19	18.08	4.12	3.97
12:25 PM	4.16	18.08	4.15	3.97
12:26 PM	4.15	18.12	4.09	3.90
12:27 PM	4.22	18.09	4.00	3.80
12:28 PM	4.24	18.13	4.08	3.85
12:29 PM	4.21	18.17	4.04	3.93
12:30 PM	4.31	18.17	4.05	3.95
12:31 PM	4.34	18.22	4.06	3.93
12:32 PM	4.34	18.28	4.15	3.97
Average	4.24	18.10	4.04	3.92

Signature

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Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-STK-2605-0113
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 3-239
SAMPLING DATE	: 25/05/2026	SAMPLING TIME	: 11.00-12.00 a.m.
RECEIVED DATE	: 27/05/2026	ANALYTICAL DATE	: 27-29/05/2026
REPORT DATE	: 08/06/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: 3-239-0-0024
STACK LOCATION	: NHTU/CCRU (UTM : 734255E, 1405185N)		

STACK DESCRIPTION

Height	: 65	m	Flow Rate ⁽¹⁾	: 2,088	Ncu.m/min
Diameter	: 3.1	m	Excess Oxygen	: 4.22	%
Temperature	: 215.83	°C	Moisture Content	: 12.76	%
Gas Velocity	: 8.71	m/s			

PARAMETER	RESULTS ⁽¹⁾		EIA ⁽²⁾ / STANDARD ⁽³⁾	EMISSION RATE		REFERENCE METHOD
	mg/Ncu.m		mg/Ncu.m	g/s		
	4.22%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Particulate Matter (PM)	4.50	3.75	60/60	0.157	0.380	US. EPA Method 5



(Miss Pornnapa Budthum)

Analyst

REG.NO.3-239-0-0018



(Miss Siriwan Chimsa-nga)

Technical Management Team

REG.NO.3-239-0-0011

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. ⁽¹⁾ At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.
 4. ⁽²⁾ Assigned value in the Report on Revision the Project Description in the EIA Report (No.12) of Refinery Plant, B.E. 2567 (2024).
 5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-CEMS-2605-0113
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: ๓-239
SAMPLING DATE	: 25/05/2026	SAMPLING TIME	: 11.00 a.m.-00.02 p.m.
RECEIVED DATE	: 04/06/2026	ANALYTICAL DATE	: 04-06/06/2026
REPORT DATE	: 09/06/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: ๓-239-0024
STACK LOCATION	: NHTU/CCRU (UTM : 734255E, 1405185N)		

STACK DESCRIPTION

Height	: 65	m	Flow Rate ⁽¹⁾	: 2,088	Ncu.m/min
Diameter	: 3.1	m	Excess Oxygen	: 4.22	%
Temperature	: 215.83	°C	Moisture Content	: 12.76	%
Gas Velocity	: 8.71	m/s			

PARAMETER	RESULT ⁽¹⁾				EIA ⁽²⁾ / STANDARD ⁽³⁾		EMISSION RATE		REFERENCE METHOD
	ppm		mg/Ncu.m.		ppm	mg/Ncu.m.	g/s		
	4.22%O ₂	7%O ₂	4.22%O ₂	7%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Sulfur Dioxide (SO ₂)	3.28	2.74	8.59	7.17	60/60	157/157	0.299	1.500	US. EPA Method 6C
Oxide of Nitrogen (NO _x)	25.83	21.52	48.60	40.49	120/200	226/376	1.691	2.830	US. EPA Method 7E
Carbon Monoxide (CO)	0.28	0.24	0.32	0.27	100/690	115/790	0.011	0.100	US. EPA Method 10

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. ๓-239-๓-0006

(Miss Preeda Somjai)

Technical Management Team

REG.NO. ๓-239-๓-0006

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

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3. ⁽¹⁾ At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. ⁽²⁾ Assigned value in the Report on Revision the Project Description in the EIA Report (No.12) of Refinery Plant, B.E. 2567 (2024).

5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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The Monitoring Result of Emission Concentration
NHTU/CCRU
Star Petroleum Refining Public Co., Ltd.
May 25, 2026

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	4.35	4.30	25.84	25.83	21.63
2	4.22	4.18	25.93	25.92	21.55
3	4.21	4.17	25.75	25.74	21.39
Average	4.26	4.22	25.84	25.83	21.52

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	4.35	4.30	3.54	3.51	2.94
2	4.22	4.18	3.17	3.14	2.61
3	4.21	4.17	3.23	3.20	2.66
Average	4.26	4.22	3.31	3.28	2.74

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	4.35	4.30	0.30	0.28	0.23
2	4.22	4.18	0.31	0.28	0.23
3	4.21	4.17	0.33	0.29	0.24
Average	4.26	4.22	0.31	0.28	0.24



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Run # : 1

Date: May 25, 2026

Location : NHTU/CCRU

Start time: 11:00 AM

Finish time: 11:20 AM

O₂ instrument Model: AMI 70

Serial No.: 161212-13

NO_x instrument Model: TELEDYNE 200 EM

Serial No.: 435

SO₂ instrument Model: TELEDYNE 100 EH

Serial No.: 186

CO instrument Model: API 300 A

Serial No.: 1070

Fuel Type : Natural Gas

Test Operator : Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
11:00 AM	4.60	25.13	3.30	0.29
11:01 AM	4.43	25.23	3.11	0.29
11:02 AM	4.43	25.11	3.23	0.29
11:03 AM	4.34	25.14	3.35	0.29
11:04 AM	4.29	25.36	3.55	0.29
11:05 AM	4.32	25.44	3.73	0.29
11:06 AM	4.35	25.61	3.92	0.29
11:07 AM	4.37	25.85	3.27	0.30
11:08 AM	4.36	25.99	3.37	0.30
11:09 AM	4.35	25.97	3.40	0.30
11:10 AM	4.38	26.00	3.44	0.30
11:11 AM	4.26	26.04	3.52	0.30
11:12 AM	4.26	26.04	3.51	0.30
11:13 AM	4.28	26.15	3.54	0.30
11:14 AM	4.33	26.34	3.55	0.30
11:15 AM	4.35	26.33	3.70	0.30
11:16 AM	4.46	26.21	3.80	0.30
11:17 AM	4.44	26.33	3.79	0.30
11:18 AM	4.29	26.35	3.80	0.30
11:19 AM	4.21	26.14	3.80	0.30
11:20 AM	4.32	25.90	3.71	0.30
Average	4.35	25.84	3.54	0.30

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Run # : 2

Date: May 25, 2026

Location : NHTU/CCRU

Start time: 11:21 AM

Finish time: 11:41 AM

O₂ instrument Model: AMI 70

Serial No.: 161212-13

NO_x instrument Model: TELEDYNE 200 EM

Serial No.: 435

SO₂ instrument Model: TELEDYNE 100 EH

Serial No.: 186

CO instrument Model: API 300 A

Serial No.: 1070

Fuel Type : Natural Gas

Test Operator : Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
11:21 AM	4.24	25.98	3.91	0.31
11:22 AM	4.20	26.12	3.05	0.31
11:23 AM	4.26	26.07	3.03	0.31
11:24 AM	4.32	26.00	3.06	0.31
11:25 AM	4.18	26.00	3.08	0.31
11:26 AM	4.22	25.97	3.11	0.31
11:27 AM	4.34	25.92	3.06	0.31
11:28 AM	4.31	25.93	3.07	0.31
11:29 AM	4.24	25.96	3.08	0.31
11:30 AM	4.15	25.90	3.08	0.31
11:31 AM	4.19	25.82	3.17	0.31
11:32 AM	4.23	25.81	3.31	0.31
11:33 AM	4.21	25.90	3.36	0.31
11:34 AM	4.22	25.93	3.29	0.31
11:35 AM	4.19	25.90	3.22	0.31
11:36 AM	4.16	25.87	3.11	0.32
11:37 AM	4.20	25.90	3.14	0.32
11:38 AM	4.28	25.88	3.08	0.32
11:39 AM	4.19	25.89	3.11	0.32
11:40 AM	4.18	25.90	3.09	0.32
11:41 AM	4.13	25.85	3.11	0.32
Average	4.22	25.93	3.17	0.31

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	May 25, 2026	Run # :	3
Start time:	11:42 AM	Location :	NHTU/CCRU
O ₂ instrument Model:	AMI 70	Finish time :	12:02 PM
NO _x instrument Model:	TELEDYNE 200 EM	Serial No.:	161212-13
SO ₂ instrument Model:	TELEDYNE 100 EH	Serial No.:	435
CO instrument Model:	API 300 A	Serial No.:	186
Fuel Type :	Natural Gas	Serial No.:	1070
		Test Operator :	Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
11:42 AM	4.14	25.86	3.10	0.32
11:43 AM	4.12	25.78	3.09	0.32
11:44 AM	4.16	25.78	3.10	0.32
11:45 AM	4.20	25.86	3.09	0.32
11:46 AM	4.25	25.93	3.23	0.32
11:47 AM	4.25	26.00	3.31	0.33
11:48 AM	4.24	26.02	3.33	0.33
11:49 AM	4.25	25.98	3.21	0.33
11:50 AM	4.30	25.91	3.06	0.33
11:51 AM	4.28	25.79	3.14	0.33
11:52 AM	4.24	25.70	3.26	0.33
11:53 AM	4.22	25.70	3.24	0.33
11:54 AM	4.19	25.76	3.33	0.33
11:55 AM	4.17	25.66	3.21	0.34
11:56 AM	4.09	25.57	3.21	0.34
11:57 AM	4.14	25.57	3.20	0.34
11:58 AM	4.22	25.55	3.21	0.34
11:59 AM	4.19	25.60	3.21	0.34
12:00 PM	4.29	25.55	3.31	0.33
12:01 PM	4.19	25.58	3.42	0.33
12:02 PM	4.22	25.70	3.51	0.34
Average	4.21	25.75	3.23	0.33

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-STK-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 3-239
SAMPLING DATE	: 23/03/2026	SAMPLING TIME	: 02.00-03.00 p.m.
RECEIVED DATE	: 24/03/2026	ANALYTICAL DATE	: 24-27/03/2026
REPORT DATE	: 30/03/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: 3-239-0-0024
STACK LOCATION	: DHTU Stack (UTM : 734140E, 1405255N)		
STACK DESCRIPTION			

Height	: 36.2	m	Flow Rate ⁽¹⁾	: 341.0	Ncu.m/min
Diameter	: 1.6	m	Excess Oxygen	: 4.33	%
Temperature	: 425.42	°C	Moisture Content	: 12.34	%
Gas Velocity	: 7.60	m/s			

PARAMETER	RESULTS ⁽¹⁾		EIA ⁽²⁾ / STANDARD ⁽³⁾	EMISSION RATE		REFERENCE METHOD
	mg/Ncu.m		mg/Ncu.m	g/s		
	4.33%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Particulate Matter (PM)	2.06	1.73	60/60	0.012	0.090	US. EPA Method 5

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG.NO.3-239-0-0018

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.3-239-0-0010

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. ⁽¹⁾ At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.
 4. ⁽²⁾ Assigned value in the Report on Revision the Project Description in the EIA Report (No.12) of Refinery Plant, B.E. 2567 (2024).
 5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-CEMS-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: ๓-239
SAMPLING DATE	: 23/03/2026	SAMPLING TIME	: 02.00-03.05 p.m.
RECEIVED DATE	: 30/03/2026	ANALYTICAL DATE	: 31/03/2026-11/05/2026
REPORT DATE	: 11/05/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: ๓-239-0024
STACK LOCATION	: DHTU Stack (UTM : 734140E, 1405255N)		
STACK DESCRIPTION			

Height	: 36.2	m	Flow Rate ⁽¹⁾	: 341.0	Ncu.m/min
Diameter	: 1.6	m	Excess Oxygen	: 4.33	%
Temperature	: 425.42	°C	Moisture Content	: 12.34	%
Gas Velocity	: 7.60	m/s			

PARAMETER	RESULT ⁽¹⁾				EIA ⁽²⁾ / STANDARD ⁽³⁾		EMISSION RATE		REFERENCE METHOD
	ppm		mg/Neu.m.		ppm	mg/Neu.m.	g/s		
	4.33%O ₂	7%O ₂	4.33%O ₂	7%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Sulfur Dioxide (SO ₂)	1.83	1.53	4.79	4.00	60/60	157/157	0.027	1.000	US. EPA Method 6C
Oxide of Nitrogen (NO _x)	34.26	28.74	64.46	54.07	120/200	226/376	0.366	0.920	US. EPA Method 7E
Carbon Monoxide (CO)	0.29	0.24	0.33	0.27	100/690	115/790	0.002	0.100	US. EPA Method 10



(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. ๓-239-๓-0006



(Miss Preeda Somjai)

Technical Management Team

REG.NO. ๓-239-๓-0006

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5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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The Monitoring Result of Emission Concentration
DHTU
Star Petroleum Refining Public Co., Ltd.
March 23, 2026

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	4.45	4.42	33.76	33.76	28.47
2	4.26	4.23	34.55	34.55	28.81
3	4.38	4.34	34.48	34.48	28.94
Average	4.36	4.33	34.26	34.26	28.74

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	4.45	4.42	1.19	1.15	0.97
2	4.26	4.23	2.04	2.01	1.68
3	4.38	4.34	2.35	2.32	1.95
Average	4.36	4.33	1.86	1.83	1.53

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	4.45	4.42	0.33	0.30	0.25
2	4.26	4.23	0.31	0.28	0.23
3	4.38	4.34	0.32	0.28	0.24
Average	4.36	4.33	0.32	0.29	0.24



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Run # : 1

Date: March 23, 2026

Location : DHTU

Start time: 2:00 PM

Finish time: 2:20 PM

O₂ instrument Model: AMI 70

Serial No.: 121121-10

NO_x instrument Model: API 200 AH

Serial No.: 441

SO₂ instrument Model: API 100 AH

Serial No.: 060

CO instrument Model: THERMO 48 C

Serial No.: 70162-365

Fuel Type : Natural Gas

Test Operator : Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
2:00 PM	4.78	30.70	0.26	0.33
2:01 PM	4.71	32.07	0.42	0.33
2:02 PM	4.71	32.35	0.60	0.33
2:03 PM	4.71	33.10	0.73	0.33
2:04 PM	4.65	33.28	0.82	0.33
2:05 PM	4.49	33.51	0.93	0.33
2:06 PM	4.48	33.94	0.99	0.34
2:07 PM	4.42	33.98	1.04	0.36
2:08 PM	4.40	34.04	1.10	0.38
2:09 PM	4.40	33.96	1.22	0.16
2:10 PM	4.35	34.14	1.26	0.34
2:11 PM	4.37	34.01	1.35	0.33
2:12 PM	4.49	34.11	1.39	0.41
2:13 PM	4.50	34.08	1.43	0.33
2:14 PM	4.30	34.16	1.52	0.33
2:15 PM	4.30	34.35	1.61	0.34
2:16 PM	4.34	34.58	1.61	0.34
2:17 PM	4.29	34.61	1.58	0.33
2:18 PM	4.33	34.73	1.64	0.33
2:19 PM	4.31	34.53	1.73	0.33
2:20 PM	4.16	34.63	1.73	0.33
Average	4.45	33.76	1.19	0.33

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 23, 2026	Run # :	2
Start time:	2:21 PM	Location :	DHTU
O ₂ instrument Model:	AMI 70	Finish time :	2:41 PM
NO _x instrument Model:	API 200 AH	Serial No.:	121121-10
SO ₂ instrument Model:	API 100 AH	Serial No.:	441
CO instrument Model:	THERMO 48 C	Serial No.:	060
Fuel Type :	Natural Gas	Serial No.:	70162-365
		Test Operator :	Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
2:21 PM	4.23	34.67	1.72	0.33
2:22 PM	4.24	34.68	1.80	0.33
2:23 PM	4.15	34.65	1.84	0.33
2:24 PM	4.30	34.74	1.85	0.30
2:25 PM	4.36	34.74	1.88	0.33
2:26 PM	4.19	34.73	1.96	0.33
2:27 PM	4.30	34.97	1.98	0.30
2:28 PM	4.33	34.88	2.02	0.25
2:29 PM	4.27	34.79	2.06	0.33
2:30 PM	4.22	34.82	1.99	0.33
2:31 PM	4.19	34.90	2.07	0.33
2:32 PM	4.18	34.50	2.08	0.31
2:33 PM	4.18	34.55	2.06	0.28
2:34 PM	4.28	34.49	2.14	0.30
2:35 PM	4.35	34.27	2.13	0.28
2:36 PM	4.32	34.05	2.18	0.31
2:37 PM	4.30	34.14	2.18	0.30
2:38 PM	4.36	34.20	2.23	0.31
2:39 PM	4.23	34.12	2.26	0.23
2:40 PM	4.20	34.32	2.23	0.33
2:41 PM	4.28	34.41	2.24	0.31
Average	4.26	34.55	2.04	0.31

Signature

Miss Katesarin Vorradetwittaya

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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 23, 2026	Run # :	3
Start time:	2:42 PM	Location :	DHTU
O ₂ instrument Model:	AMI 70	Finish time :	3:02 PM
NO _x instrument Model:	API 200 AH	Serial No.:	121121-10
SO ₂ instrument Model:	API 100 AH	Serial No.:	441
CO instrument Model:	THERMO 48 C	Serial No.:	060
Fuel Type :	Natural Gas	Serial No.:	70162-365
		Test Operator :	Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
2:42 PM	4.34	34.43	2.22	0.31
2:43 PM	4.25	34.33	2.24	0.33
2:44 PM	4.17	34.36	2.29	0.33
2:45 PM	4.30	34.55	2.32	0.33
2:46 PM	4.43	34.40	2.33	0.18
2:47 PM	4.49	34.39	2.31	0.33
2:48 PM	4.41	34.60	2.36	0.33
2:49 PM	4.33	34.68	2.37	0.33
2:50 PM	4.41	34.79	2.38	0.31
2:51 PM	4.39	34.56	2.39	0.30
2:52 PM	4.34	34.69	2.39	0.26
2:53 PM	4.30	34.61	2.45	0.33
2:54 PM	4.21	34.23	2.32	0.34
2:55 PM	4.53	34.35	2.31	0.35
2:56 PM	4.64	34.21	2.33	0.31
2:57 PM	4.26	34.25	2.35	0.27
2:58 PM	4.29	34.28	2.45	0.36
2:59 PM	4.37	34.59	2.41	0.35
3:00 PM	4.52	34.65	2.35	0.31
3:01 PM	4.42	34.42	2.36	0.44
3:02 PM	4.53	34.65	2.33	0.35
Average	4.38	34.48	2.35	0.32

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-STK-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 7-239
SAMPLING DATE	: 23/03/2026	SAMPLING TIME	: 10.50-11.50 a.m.
RECEIVED DATE	: 24/03/2026	ANALYTICAL DATE	: 24-27/03/2026
REPORT DATE	: 30/03/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: 7-239-0-0024
STACK LOCATION	: HVGO-HTU (UTM : 734170E, 1405238N)		
STACK DESCRIPTION			

Height	: 36.2	m	Flow Rate ⁽¹⁾	: 326.9	Ncu.m/min
Diameter	: 1.6	m	Excess Oxygen	: 6.67	%
Temperature	: 355.92	°C	Moisture Content	: 10.68	%
Gas Velocity	: 6.43	m/s			

PARAMETER	RESULTS ⁽¹⁾		EIA ⁽²⁾ / STANDARD ⁽³⁾	EMISSION RATE		REFERENCE METHOD
	mg/Ncu.m		mg/Ncu.m	g/s		
	6.67%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Particulate Matter (PM)	4.57	4.46	60/60	0.025	0.030	US. EPA Method 5



(Miss Pornnapa Budthum)

Analyst

REG.NO.7-239-0-0018



(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.7-239-0-0010

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-CEMS-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: ๓-239
SAMPLING DATE	: 23/03/2026	SAMPLING TIME	: 10.50 a.m.-01.05 p.m.
RECEIVED DATE	: 30/03/2026	ANALYTICAL DATE	: 31/03/2026-11/05/2026
REPORT DATE	: 11/05/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: ๓-239-0024
STACK LOCATION	: HVGO-HTU (UTM : 734170E, 1405238N)		

STACK DESCRIPTION

Height	: 36.2	m	Flow Rate ⁽¹⁾	: 326.9	Ncu.m/min
Diameter	: 1.6	m	Excess Oxygen	: 6.67	%
Temperature	: 355.92	°C	Moisture Content	: 10.68	%
Gas Velocity	: 6.43	m/s			

PARAMETER	RESULT ⁽¹⁾				EIA ⁽²⁾ / STANDARD ⁽³⁾		EMISSION RATE		REFERENCE METHOD
	ppm		mg/Ncu.m.		ppm	mg/Ncu.m.	g/s		
	6.67%O ₂	7%O ₂	6.67%O ₂	7%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Sulfur Dioxide (SO ₂)	0.49	0.48	1.28	1.26	60/60	157/157	0.007	0.630	US. EPA Method 6C
Oxide of Nitrogen (NO _x)	47.58	46.47	89.52	87.43	120/200	226/376	0.488	0.920	US. EPA Method 7E
Carbon Monoxide (CO)	1.24	1.21	1.42	1.39	100/690	115/790	0.008	0.100	US. EPA Method 10

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. ๓-239-๓-0006

(Miss Preeda Somjai)

Technical Management Team

REG.NO. ๓-239-๓-0006

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The Monitoring Result of Emission Concentration HVGO-HTU

Star Petroleum Refining Public Co., Ltd.

March 23, 2026

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	6.91	6.85	48.44	48.45	47.93
2	6.65	6.60	47.56	47.57	46.24
3	6.60	6.56	46.71	46.71	45.28
Average	6.72	6.67	47.57	47.58	46.47

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	6.91	6.85	0.30	0.27	0.27
2	6.65	6.60	0.53	0.50	0.49
3	6.60	6.56	0.75	0.71	0.69
Average	6.72	6.67	0.53	0.49	0.48

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	6.91	6.85	1.88	1.84	1.82
2	6.65	6.60	1.27	1.23	1.20
3	6.60	6.56	0.67	0.64	0.62
Average	6.72	6.67	1.27	1.24	1.21



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Run # : 1

Date: March 23, 2026

Location : HVGO-HTU

Start time: 12:00 PM

Finish time: 12:20 PM

O₂ instrument Model: AMI 70

Serial No.: 121121-10

NO_x instrument Model: API 200 AH

Serial No.: 441

SO₂ instrument Model: API 100 AH

Serial No.: 060

CO instrument Model: THERMO 48 C

Serial No.: 70162-365

Fuel Type : Natural Gas

Test Operator : Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
12:00 PM	6.91	50.56	0.29	1.21
12:01 PM	6.91	49.87	0.31	1.24
12:02 PM	6.83	49.95	0.30	1.27
12:03 PM	6.85	49.10	0.29	0.98
12:04 PM	6.90	48.44	0.27	0.76
12:05 PM	6.90	48.28	0.23	1.21
12:06 PM	6.84	48.61	0.25	0.95
12:07 PM	6.96	48.06	0.27	1.10
12:08 PM	6.93	47.89	0.27	1.68
12:09 PM	6.94	48.56	0.27	0.40
12:10 PM	6.91	48.80	0.25	3.10
12:11 PM	6.88	48.71	0.28	2.99
12:12 PM	6.92	48.38	0.27	2.93
12:13 PM	7.04	48.20	0.33	2.91
12:14 PM	7.09	47.76	0.33	2.79
12:15 PM	6.93	47.78	0.33	2.58
12:16 PM	6.82	47.88	0.33	2.28
12:17 PM	6.90	47.83	0.34	2.43
12:18 PM	6.84	47.65	0.35	2.29
12:19 PM	6.91	47.67	0.33	2.21
12:20 PM	6.90	47.25	0.40	2.09
Average	6.91	48.44	0.30	1.88

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 23, 2026	Run # :	2
Start time:	12:21 PM	Location :	HVGO-HTU
O ₂ instrument Model:	AMI 70	Finish time :	12:41 PM
NO _x instrument Model:	API 200 AH	Serial No.:	121121-10
SO ₂ instrument Model:	API 100 AH	Serial No.:	441
CO instrument Model:	THERMO 48 C	Serial No.:	060
Fuel Type :	Natural Gas	Serial No.:	70162-365
		Test Operator :	Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
12:21 PM	6.78	47.52	0.41	2.00
12:22 PM	6.89	47.55	0.40	1.91
12:23 PM	6.82	47.25	0.43	1.79
12:24 PM	6.71	47.59	0.44	1.64
12:25 PM	6.74	47.64	0.46	1.60
12:26 PM	6.71	47.62	0.51	1.50
12:27 PM	6.67	47.58	0.49	1.43
12:28 PM	6.62	47.89	0.52	1.41
12:29 PM	6.54	48.01	0.52	1.32
12:30 PM	6.56	48.03	0.52	1.26
12:31 PM	6.41	47.96	0.50	1.21
12:32 PM	6.50	48.18	0.57	1.42
12:33 PM	6.40	48.33	0.56	0.33
12:34 PM	6.39	48.44	0.56	1.11
12:35 PM	6.43	48.22	0.57	1.11
12:36 PM	6.49	47.39	0.57	1.02
12:37 PM	6.54	47.27	0.60	1.02
12:38 PM	6.72	46.94	0.59	0.96
12:39 PM	6.85	46.66	0.63	0.92
12:40 PM	6.95	46.52	0.64	0.89
12:41 PM	6.87	46.25	0.63	0.86
Average	6.65	47.56	0.53	1.27

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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Run # : 3

Date: March 23, 2026

Location : HVGO-HTU

Start time: 12:42 PM

Finish time : 1:02 PM

O₂ instrument Model: AMI 70

Serial No.: 121121-10

NO_x instrument Model: API 200 AH

Serial No.: 441

SO₂ instrument Model: API 100 AH

Serial No.: 060

CO instrument Model: THERMO 48 C

Serial No.: 70162-365

Fuel Type : Natural Gas

Test Operator : Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
12:42 PM	6.75	46.54	0.65	0.75
12:43 PM	6.56	46.91	0.65	0.90
12:44 PM	6.63	47.29	0.64	0.76
12:45 PM	6.61	46.32	0.68	0.28
12:46 PM	6.47	46.71	0.71	0.79
12:47 PM	6.42	47.00	0.71	0.72
12:48 PM	6.45	47.02	0.73	0.72
12:49 PM	6.58	47.03	0.75	0.74
12:50 PM	6.60	47.01	0.75	0.74
12:51 PM	6.64	47.05	0.75	0.72
12:52 PM	6.73	46.90	0.77	0.72
12:53 PM	6.67	46.72	0.75	0.71
12:54 PM	6.63	46.61	0.78	0.62
12:55 PM	6.61	46.51	0.82	0.65
12:56 PM	6.64	46.41	0.78	0.62
12:57 PM	6.73	46.29	0.83	0.62
12:58 PM	6.82	46.17	0.80	0.62
12:59 PM	6.71	46.21	0.84	0.62
1:00 PM	6.46	46.42	0.87	0.62
1:01 PM	6.53	47.23	0.79	0.64
1:02 PM	6.43	46.57	0.63	0.55
Average	6.60	46.71	0.75	0.67

Signature

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-STK-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: ๓-239
SAMPLING DATE	: 18/03/2026	SAMPLING TIME	: 02.50-03.50 p.m.
RECEIVED DATE	: 24/03/2026	ANALYTICAL DATE	: 24-27/03/2026
REPORT DATE	: 30/03/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: ๓-239-๓-0024
STACK LOCATION	: WCN-HTU (UTM : 734270E, 1405460N)		
STACK DESCRIPTION			

Height	: 32.5	m	Flow Rate ⁽¹⁾	: 41.04	Ncu.m/min
Diameter	: 0.58	m	Excess Oxygen	: 8.66	%
Temperature	: 297.75	°C	Moisture Content	: 12.03	%
Gas Velocity	: 5.66	m/s			

PARAMETER	RESULTS ⁽¹⁾		EIA ⁽²⁾ / STANDARD ⁽³⁾	EMISSION RATE		REFERENCE METHOD
	mg/Ncu.m		mg/Ncu.m	g/s		
	8.66%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Particulate Matter (PM)	3.24	3.68	35/60	0.002	0.080	US. EPA Method 5



(Miss Pornnapa Budthum)

Analyst

REG.NO.๓-239-๓-0018



(Miss Narisa Poowasanpet)

Technical Management Team

REG.NO.๓-239-๓-0010

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. ⁽¹⁾ At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.
 4. ⁽²⁾ Assigned value in the Report on Revision the Project Description in the EIA Report (No.12) of Refinery Plant, B.E. 2567 (2024).
 5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-CEMS-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 3-239
SAMPLING DATE	: 18/03/2026	SAMPLING TIME	: 02.50-03.55 p.m.
RECEIVED DATE	: 30/03/2026	ANALYTICAL DATE	: 31/03/2026-11/05/2026
REPORT DATE	: 11/05/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: 3-239-0024
STACK LOCATION	: WCN-HTU (UTM : 734270E, 1405460N)		

STACK DESCRIPTION

Height	: 32.5	m	Flow Rate ⁽¹⁾	: 41.0	Ncu.m/min
Diameter	: 0.58	m	Excess Oxygen	: 8.66	%
Temperature	: 297.75	°C	Moisture Content	: 12.03	%
Gas Velocity	: 5.66	m/s			

PARAMETER	RESULT ⁽¹⁾				EIA ⁽²⁾ / STANDARD ⁽³⁾		EMISSION RATE		REFERENCE METHOD
	ppm		mg/Neu.m.		ppm	mg/Neu.m.	g/s		
	8.66%O ₂	7%O ₂	8.66%O ₂	7%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Sulfur Dioxide (SO ₂)	3.56	4.05	9.32	10.60	20/60	52/157	0.006	0.100	US. EPA Method 6C
Oxide of Nitrogen (NO _x)	23.04	26.16	43.35	49.22	30/200	56/376	0.030	0.125	US. EPA Method 7E
Carbon Monoxide (CO)	3.69	4.19	4.23	4.80	690/690	790/790	0.003	2.300	US. EPA Method 10

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. 3-239-3-0006

(Miss Preeda Somjai)

Technical Management Team

REG.NO. 3-239-3-0006

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5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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**The Monitoring Result of Emission Concentration
WCN-HTU
Star Petroleum Refining Public Co., Ltd.
March 18, 2026**

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	8.70	8.70	23.01	22.99	26.19
2	8.60	8.61	23.16	23.14	26.17
3	8.66	8.67	23.01	22.99	26.13
Average	8.65	8.66	23.06	23.04	26.16

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	8.70	8.70	3.24	3.19	3.63
2	8.60	8.61	3.70	3.64	4.12
3	8.66	8.67	3.92	3.86	4.39
Average	8.65	8.66	3.62	3.56	4.05

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	8.70	8.70	3.64	3.58	4.08
2	8.60	8.61	3.73	3.67	4.15
3	8.66	8.67	3.89	3.82	4.34
Average	8.65	8.66	3.75	3.69	4.19



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 18, 2026	Run # :	1
Start time:	2:50 PM	Location :	WCN-HTU
O ₂ instrument Model:	AMI 70	Finish time :	3:10 PM
NO _x instrument Model:	TELEDYNE 200 EM	Serial No.:	121121-10
SO ₂ instrument Model:	API 100 AH	Serial No.:	435
CO instrument Model:	THERMO 48 C	Serial No.:	118
Fuel Type :	Natural Gas	Serial No.:	0412106049
		Test Operator :	Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
2:50 PM	8.67	22.84	3.08	4.41
2:51 PM	8.67	22.88	3.17	3.89
2:52 PM	8.67	22.83	3.03	3.20
2:53 PM	8.67	22.92	3.03	3.23
2:54 PM	8.67	23.01	3.03	3.24
2:55 PM	8.67	23.36	3.03	3.77
2:56 PM	8.68	22.86	3.04	4.10
2:57 PM	8.67	22.92	3.43	3.70
2:58 PM	9.00	22.87	3.54	3.67
2:59 PM	8.85	22.15	3.57	3.73
3:00 PM	8.74	22.42	2.93	3.68
3:01 PM	8.67	22.81	3.09	3.54
3:02 PM	8.70	23.17	3.11	3.61
3:03 PM	8.68	23.31	3.21	3.56
3:04 PM	8.68	23.35	3.26	3.47
3:05 PM	8.68	23.31	3.28	3.60
3:06 PM	8.76	23.28	3.34	3.61
3:07 PM	8.72	23.27	3.39	3.61
3:08 PM	8.62	23.25	3.45	3.61
3:09 PM	8.59	23.20	3.47	3.61
3:10 PM	8.64	23.26	3.53	3.60
Average	8.70	23.01	3.24	3.64

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 18, 2026	Run # :	2
Start time:	3:11 PM	Location :	WCN-HTU
O ₂ instrument Model:	AMI 70	Finish time :	3:31 PM
NO _x instrument Model:	TELEDYNE 200 EM	Serial No.:	121121-10
SO ₂ instrument Model:	API 100 AH	Serial No.:	435
CO instrument Model:	THERMO 48 C	Serial No.:	118
Fuel Type :	Natural Gas	Serial No.:	0412106049
		Test Operator :	Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
3:11 PM	8.58	23.27	3.48	3.66
3:12 PM	8.61	23.21	3.57	3.70
3:13 PM	8.63	23.23	3.64	3.59
3:14 PM	8.50	23.25	3.63	3.66
3:15 PM	8.50	23.13	3.69	3.63
3:16 PM	8.47	23.05	3.62	3.68
3:17 PM	8.58	23.10	3.61	3.70
3:18 PM	8.41	23.10	3.67	3.70
3:19 PM	8.52	23.07	3.67	3.71
3:20 PM	8.50	23.09	3.73	3.80
3:21 PM	8.66	23.15	3.68	3.71
3:22 PM	8.55	23.20	3.72	3.73
3:23 PM	8.58	23.15	3.75	3.80
3:24 PM	8.60	23.11	3.78	3.79
3:25 PM	8.66	23.12	3.76	3.74
3:26 PM	8.59	23.13	3.79	3.70
3:27 PM	8.68	23.09	3.79	3.81
3:28 PM	8.68	23.15	3.81	3.71
3:29 PM	8.72	23.22	3.80	3.73
3:30 PM	8.76	23.22	3.81	3.83
3:31 PM	8.86	23.26	3.80	3.90
Average	8.60	23.16	3.70	3.73

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Run # : 3

Date: March 18, 2026

Location : WCN-HTU

Start time: 3:32 PM

Finish time: 3:52 PM

O₂ instrument Model: AMI 70

Serial No.: 121121-10

NO_x instrument Model: TELEDYNE 200 EM

Serial No.: 435

SO₂ instrument Model: API 100 AH

Serial No.: 118

CO instrument Model: THERMO 48 C

Serial No.: 0412106049

Fuel Type : Natural Gas

Test Operator : Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
3:32 PM	8.86	23.26	3.84	3.90
3:33 PM	8.82	23.17	3.81	3.81
3:34 PM	8.84	23.15	3.85	3.86
3:35 PM	8.81	23.18	3.84	3.80
3:36 PM	8.83	23.13	3.91	3.85
3:37 PM	8.70	23.11	3.94	3.89
3:38 PM	8.63	23.18	3.93	3.89
3:39 PM	8.56	23.09	3.89	3.86
3:40 PM	8.70	22.98	3.84	3.86
3:41 PM	8.73	23.00	3.89	3.84
3:42 PM	8.60	22.93	3.92	3.79
3:43 PM	8.49	22.76	4.01	3.93
3:44 PM	8.56	22.80	3.99	3.89
3:45 PM	8.51	22.98	4.02	3.91
3:46 PM	8.45	22.94	3.99	3.88
3:47 PM	8.62	22.83	3.97	3.94
3:48 PM	8.51	22.89	3.91	3.91
3:49 PM	8.59	22.99	3.93	3.94
3:50 PM	8.56	22.99	3.94	3.96
3:51 PM	8.72	22.98	3.91	4.03
3:52 PM	8.74	22.94	3.96	3.91
Average	8.66	23.01	3.92	3.89

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-STK-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 3-239
SAMPLING DATE	: 18/03/2026	SAMPLING TIME	: 01.00-02.00 p.m.
RECEIVED DATE	: 24/03/2026	ANALYTICAL DATE	: 24-27/03/2026
REPORT DATE	: 30/03/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: 3-239-0-0024
STACK LOCATION	: Boiler#3 (UTM : 734400E, 1404932N)		
STACK DESCRIPTION			

Height	: 32.4	m	Flow Rate ⁽¹⁾	: 559.8	Ncu.m/min
Diameter	: 1.52	m	Excess Oxygen	: 3.22	%
Temperature	: 180.58	°C	Moisture Content	: 11.91	%
Gas Velocity	: 8.92	m/s			

PARAMETER	RESULTS ⁽¹⁾		EIA ⁽²⁾ / STANDARD ⁽³⁾	EMISSION RATE		REFERENCE METHOD
	mg/Ncu.m		mg/Ncu.m	g/s		
	3.22%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Particulate Matter (PM)	3.71	2.92	20/60	0.035	0.400	US. EPA Method 5

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG.NO. 3-239-0-0018

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO. 3-239-0-0010

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 5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-CEMS-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: ๓-239
SAMPLING DATE	: 18/03/2026	SAMPLING TIME	: 00.40-02.00 p.m.
RECEIVED DATE	: 30/03/2026	ANALYTICAL DATE	: 31/03/2026-11/05/2026
REPORT DATE	: 11/05/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: ๓-239-0024
STACK LOCATION	: Boiler#3 (UTM : 734400E, 1404932N)		
STACK DESCRIPTION			

Height	: 32.4	m	Flow Rate ⁽¹⁾	: 559.8	Ncu.m/min
Diameter	: 1.52	m	Excess Oxygen	: 3.22	%
Temperature	: 180.58	°C	Moisture Content	: 11.91	%
Gas Velocity	: 8.92	m/s			

PARAMETER	RESULT ⁽¹⁾				EIA ⁽²⁾ / STANDARD ⁽³⁾		EMISSION RATE		REFERENCE METHOD
	ppm		mg/Ncu.m.		ppm	mg/Ncu.m.	g/s		
	3.22%O ₂	7%O ₂	3.22%O ₂	7%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Sulfur Dioxide (SO ₂)	1.76	1.39	4.61	3.64	20/60	52/157	0.043	1.000	US. EPA Method 6C
Oxide of Nitrogen (NO _x)	43.27	34.02	81.41	64.00	55/200	103/376	0.760	2.200	US. EPA Method 7E
Carbon Monoxide (CO)	0.91	0.71	1.04	0.81	8/690	115/790	0.010	0.200	US. EPA Method 10


(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. ๓-239-๓-0006


(Miss Preeda Somjai)

Technical Management Team

REG.NO. ๓-239-๓-0006

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

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3. ⁽¹⁾ At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. ⁽²⁾ Assigned value in the Report on Revision the Project Description in the EIA Report (No.12) of Refinery Plant, B.E. 2567 (2024).

5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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The Monitoring Result of Emission Concentration
Boiler 3
Star Petroleum Refining Public Co., Ltd.
March 18, 2026

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	3.34	3.29	42.78	42.78	33.77
2	3.26	3.21	43.95	43.95	34.53
3	3.21	3.16	43.09	43.09	33.76
Average	3.27	3.22	43.28	43.27	34.02

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	3.34	3.29	1.55	1.52	1.20
2	3.26	3.21	1.89	1.86	1.46
3	3.21	3.16	1.95	1.91	1.50
Average	3.27	3.22	1.80	1.76	1.39

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	3.34	3.29	0.94	0.92	0.73
2	3.26	3.21	1.01	0.98	0.77
3	3.21	3.16	0.86	0.82	0.64
Average	3.27	3.22	0.94	0.91	0.71



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 18, 2026	Run # :	1
Start time:	12:40 PM	Location :	Boiler 3
O ₂ instrument Model:	AMI 70	Finish time :	1:00 PM
NO _x instrument Model:	TELEDYNE 200 EM	Serial No.:	161212-13
SO ₂ instrument Model:	API 100 AH	Serial No.:	435
CO instrument Model:	THERMO 48 C	Serial No.:	058
Fuel Type :	Natural Gas	Serial No.:	78253-388
		Test Operator :	Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
12:40 PM	3.50	40.30	0.99	0.93
12:41 PM	3.44	40.26	1.17	1.17
12:42 PM	3.48	40.84	1.27	0.81
12:43 PM	3.37	41.45	1.40	0.98
12:44 PM	3.42	42.18	1.47	0.89
12:45 PM	3.37	42.59	1.51	0.93
12:46 PM	3.39	42.70	1.55	0.94
12:47 PM	3.35	42.85	1.60	1.01
12:48 PM	3.38	43.16	1.60	0.91
12:49 PM	3.29	43.50	1.58	1.12
12:50 PM	3.27	43.65	1.65	0.78
12:51 PM	3.28	43.62	1.62	1.09
12:52 PM	3.25	43.64	1.61	0.84
12:53 PM	3.33	43.57	1.66	0.86
12:54 PM	3.28	43.32	1.68	0.95
12:55 PM	3.25	42.95	1.66	0.91
12:56 PM	3.24	42.80	1.69	0.85
12:57 PM	3.27	43.16	1.72	0.90
12:58 PM	3.24	43.63	1.70	0.93
12:59 PM	3.36	44.05	1.73	0.93
1:00 PM	3.32	44.25	1.77	1.01
Average	3.34	42.78	1.55	0.94

Signature

Miss Katesarin Vorradetwittaya
Environmental Scientist



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 18, 2026	Run # :	2
Start time:	1:01 PM	Location :	Boiler 3
O ₂ instrument Model:	AMI 70	Finish time :	1:21 PM
NO _x instrument Model:	TELEDYNE 200 EM	Serial No.:	161212-13
SO ₂ instrument Model:	API 100 AH	Serial No.:	435
CO instrument Model:	THERMO 48 C	Serial No.:	058
Fuel Type :	Natural Gas	Serial No.:	78253-388
		Test Operator :	Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
1:01 PM	3.24	44.32	1.76	1.07
1:02 PM	3.26	44.55	1.77	0.86
1:03 PM	3.26	44.61	1.83	0.87
1:04 PM	3.29	44.51	1.87	0.91
1:05 PM	3.32	44.30	1.96	0.97
1:06 PM	3.24	43.81	1.98	1.00
1:07 PM	3.23	43.38	1.93	1.15
1:08 PM	3.24	43.42	1.88	1.14
1:09 PM	3.22	43.65	1.84	1.25
1:10 PM	3.26	43.47	1.85	1.22
1:11 PM	3.23	43.45	1.85	1.32
1:12 PM	3.24	43.87	1.81	1.35
1:13 PM	3.23	44.08	1.87	1.35
1:14 PM	3.25	43.83	1.91	1.36
1:15 PM	3.29	43.69	1.93	1.43
1:16 PM	3.31	43.72	1.96	0.51
1:17 PM	3.26	43.76	1.88	0.58
1:18 PM	3.26	43.93	1.94	0.61
1:19 PM	3.25	44.06	1.97	0.71
1:20 PM	3.24	44.27	2.03	0.82
1:21 PM	3.28	44.32	1.97	0.75
Average	3.26	43.95	1.89	1.01

Signature

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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 18, 2026	Run # :	3
Start time:	1:22 PM	Location :	Boiler 3
O₂ instrument Model:	AMI 70	Finish time :	1:42 PM
NO_x instrument Model:	TELEDYNE 200 EM	Serial No.:	161212-13
SO₂ instrument Model:	API 100 AH	Serial No.:	435
CO instrument Model:	THERMO 48 C	Serial No.:	058
Fuel Type :	Natural Gas	Serial No.:	78253-388
		Test Operator :	Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
1:22 PM	3.24	44.26	1.97	0.68
1:23 PM	3.27	44.00	1.97	0.72
1:24 PM	3.22	43.57	2.02	0.71
1:25 PM	3.23	43.18	1.97	0.75
1:26 PM	3.24	42.76	1.92	0.73
1:27 PM	3.22	42.93	1.96	0.85
1:28 PM	3.15	43.33	1.87	0.87
1:29 PM	3.25	43.34	1.89	0.93
1:30 PM	3.23	43.13	1.88	0.88
1:31 PM	3.21	42.97	1.91	0.89
1:32 PM	3.25	43.19	1.93	0.91
1:33 PM	3.19	43.89	1.97	0.83
1:34 PM	3.22	44.21	1.96	0.88
1:35 PM	3.24	43.76	1.97	0.94
1:36 PM	3.23	42.90	1.98	1.00
1:37 PM	3.25	42.05	1.97	1.00
1:38 PM	3.24	41.80	1.96	0.92
1:39 PM	3.16	42.08	1.92	0.83
1:40 PM	3.12	42.32	1.90	0.84
1:41 PM	3.14	42.51	1.97	0.95
1:42 PM	3.14	42.74	1.99	0.89
Average	3.21	43.09	1.95	0.86

Signature

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-STK-2605-0113
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 3-239
SAMPLING DATE	: 25/05/2026	SAMPLING TIME	: 02.40-04.04 p.m.
RECEIVED DATE	: 27/05/2026	ANALYTICAL DATE	: 27-29/05/2026
REPORT DATE	: 08/06/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: 3-239-3-0024
STACK LOCATION	: SRU/TGTU (UTM : 733930E, 1405370N)		

STACK DESCRIPTION

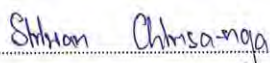
Height	: 70.1	m	Flow Rate ⁽¹⁾	: 300.9	Ncu.m/min
Diameter	: 2.2	m	Excess Oxygen	: 6.39	%
Temperature	: 488.33	°C	Moisture Content	: 15.40	%
Gas Velocity	: 4.02	m/s			

PARAMETER	RESULTS ⁽¹⁾		EIA ⁽²⁾ / STANDARD ⁽³⁾	EMISSION RATE		REFERENCE METHOD
	mg/Ncu.m		mg/Ncu.m	g/s		
	6.39%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Particulate Matter (PM)	7.35	7.04	60/-	0.037	0.040	US. EPA Method 5


(Miss Pornnapa Budthum)

Analyst

REG.NO.3-239-3-0018


(Miss Siriwan Chimsa-nga)

Technical Management Team

REG.NO.3-239-3-0011

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. ⁽¹⁾ At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.
 4. ⁽²⁾ Assigned value in the Report on Revision the Project Description in the EIA Report (No.12) of Refinery Plant, B.E. 2567 (2024).
 5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-STK-2605-0113
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: -
SAMPLING DATE	: 25/05/2026	SAMPLING TIME	: 02.40-04.04 p.m.
RECEIVED DATE	: 27/05/2026	ANALYTICAL DATE	: 04/06/2026
REPORT DATE	: 06/06/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: -
STACK LOCATION	: SRU/TGTU (UTM : 733930E, 1405370N)		
STACK DESCRIPTION			

Height	: 70.1	m	Flow Rate ⁽¹⁾	: 300.9	Ncu.m/min
Diameter	: 2.2	m	Excess Oxygen	: 6.39	%
Temperature	: 488.33	°C	Moisture Content	: 15.40	%
Gas Velocity	: 4.02	m/s			

PARAMETER	RESULT ⁽¹⁾				EIA ⁽²⁾ / STANDARD		EMISSION RATE		REFERENCE METHOD
	ppm		mg/Ncu.m.		ppm	mg/Ncu.m.	g/s		
	6.39%O ₂	7%O ₂	6.39%O ₂	7%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Hydrogen Sulfide (H ₂ S)	ND (<0.3)	ND (<0.3)	ND (<0.4)	ND (<0.4)	60/-	83/-	<0.002	0.040	US. EPA Method 16

Sudaporn S.
(Miss Sudaporn Soonthorn)

Analyst

Sitwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

Technical Management Team

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4. ⁽²⁾ Assigned value in the Report on Revision the Project Description in the EIA Report (No.12) of Refinery Plant, B.E. 2567 (2024).

5. ND (Non-Detectable) means the lowest value that can be detected by the analyzer.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-CEMS-2605-0113
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 3-239
SAMPLING DATE	: 25/05/2026	SAMPLING TIME	: 02.40-04.12 p.m.
RECEIVED DATE	: 04/06/2026	ANALYTICAL DATE	: 04-06/06/2026
REPORT DATE	: 09/06/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: 3-239-0024
STACK LOCATION	: SRU/TGTU (UTM : 733930E, 1405370N)		

STACK DESCRIPTION

Height	: 70.1	m	Flow Rate ⁽¹⁾	: 300.9	Ncu.m/min
Diameter	: 2.2	m	Excess Oxygen	: 6.39	%
Temperature	: 488.33	°C	Moisture Content	: 15.40	%
Gas Velocity	: 6.39	m/s			

PARAMETER	RESULT ⁽¹⁾				EIA ⁽²⁾ / STANDARD ⁽³⁾		EMISSION RATE		REFERENCE METHOD
	ppm		mg/Ncu.m.		ppm	mg/Ncu.m.	g/s		
	6.39%O ₂	7%O ₂	6.39%O ₂	7%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Sulfur Dioxide (SO ₂)	223.72	214.32	585.61	561.00	500/500	1,309/1,309	2.937	10.000	US. EPA Method 6C
Oxide of Nitrogen (NO _x)	14.74	14.12	27.73	26.57	60/200	113/376	0.139	0.320	US. EPA Method 7E
Carbon Monoxide (CO)	341.09	326.75	390.61	374.19	350/690	401/790	1.959	2.000	US. EPA Method 10

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. 3-239-ก-0006

(Miss Preeda Somjai)

Technical Management Team

REG.NO. 3-239-ก-0006

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5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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The Monitoring Result of Emission Concentration
SRU/TGTU
Star Petroleum Refining Public Co., Ltd.
May 25, 2026

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	6.44	6.40	14.86	14.85	14.24
2	6.42	6.38	14.76	14.75	14.12
3	6.43	6.39	14.62	14.61	14.00
Average	6.43	6.39	14.75	14.74	14.12

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	6.44	6.40	224.30	224.62	215.33
2	6.42	6.38	223.18	223.51	213.97
3	6.43	6.39	222.71	223.04	213.66
Average	6.43	6.39	223.40	223.72	214.32

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	6.44	6.40	336.59	337.16	323.21
2	6.42	6.38	341.38	341.94	327.34
3	6.43	6.39	343.64	344.18	329.71
Average	6.43	6.39	340.54	341.09	326.75



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Run # : 1

Date: May 25, 2026

Location : SRU/TGTU

Start time: 3:10 PM

Finish time: 3:30 PM

O₂ instrument Model: AMI 70

Serial No.: 161212-13

NO_x instrument Model: TELEDYNE 200 EM

Serial No.: 435

SO₂ instrument Model: TELEDYNE 100 EH

Serial No.: 186

CO instrument Model: API 300 A

Serial No.: 1070

Fuel Type : Natural Gas

Test Operator : Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
3:10 PM	6.49	14.60	225.20	339.28
3:11 PM	6.44	14.69	223.55	338.61
3:12 PM	6.46	14.85	224.40	336.26
3:13 PM	6.53	14.90	223.12	334.00
3:14 PM	6.49	14.80	224.15	333.38
3:15 PM	6.46	14.75	224.48	333.47
3:16 PM	6.51	14.77	223.05	334.77
3:17 PM	6.42	14.76	223.45	334.21
3:18 PM	6.39	14.87	224.35	332.39
3:19 PM	6.42	14.93	224.15	336.55
3:20 PM	6.37	14.89	224.63	339.50
3:21 PM	6.38	14.94	223.05	337.38
3:22 PM	6.45	14.91	222.91	336.33
3:23 PM	6.48	14.98	226.45	336.41
3:24 PM	6.48	15.00	224.48	338.17
3:25 PM	6.44	14.84	224.75	341.35
3:26 PM	6.40	14.86	225.06	341.13
3:27 PM	6.36	14.95	225.13	338.39
3:28 PM	6.38	14.97	224.63	335.30
3:29 PM	6.45	14.91	224.33	334.69
3:30 PM	6.37	14.86	225.06	336.72
Average	6.44	14.86	224.30	336.59

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Run # : 2

Date: May 25, 2026

Location : SRU/TGTU

Start time: 3:31 PM

Finish time : 3:51 PM

O₂ instrument Model: AMI 70

Serial No.: 161212-13

NO_x instrument Model: TELEDYNE 200 EM

Serial No.: 435

SO₂ instrument Model: TELEDYNE 100 EH

Serial No.: 186

CO instrument Model: API 300 A

Serial No.: 1070

Fuel Type : Natural Gas

Test Operator : Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
3:31 PM	6.31	14.87	226.44	338.58
3:32 PM	6.30	14.92	227.55	338.64
3:33 PM	6.43	14.83	225.59	338.39
3:34 PM	6.44	14.71	224.69	339.28
3:35 PM	6.41	14.70	225.28	341.84
3:36 PM	6.43	14.68	224.30	344.37
3:37 PM	6.43	14.69	223.35	334.94
3:38 PM	6.44	14.66	222.29	338.92
3:39 PM	6.41	14.65	222.55	342.82
3:40 PM	6.40	14.68	223.44	345.78
3:41 PM	6.38	14.64	224.04	346.27
3:42 PM	6.51	14.63	222.20	344.00
3:43 PM	6.46	14.62	222.29	342.37
3:44 PM	6.38	14.75	223.44	345.67
3:45 PM	6.53	14.85	220.35	344.11
3:46 PM	6.52	14.78	220.39	344.15
3:47 PM	6.41	14.77	221.24	342.72
3:48 PM	6.42	14.87	221.12	342.10
3:49 PM	6.35	14.91	221.57	341.57
3:50 PM	6.37	14.95	222.26	337.46
3:51 PM	6.40	14.90	222.39	335.10
Average	6.42	14.76	223.18	341.38

Signature

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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	May 25, 2026	Run # :	3
Start time:	3:52 PM	Location :	SRU/TGTU
O ₂ instrument Model:	AMI 70	Finish time :	4:12 PM
NO _x instrument Model:	TELEDYNE 200 EM	Serial No.:	161212-13
SO ₂ instrument Model:	TELEDYNE 100 EH	Serial No.:	435
CO instrument Model:	API 300 A	Serial No.:	186
Fuel Type :	Natural Gas	Serial No.:	1070
		Test Operator :	Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
3:52 PM	6.50	14.76	221.87	336.90
3:53 PM	6.42	14.65	222.78	340.23
3:54 PM	6.41	14.64	222.87	342.26
3:55 PM	6.45	14.64	222.46	343.43
3:56 PM	6.42	14.63	222.72	340.96
3:57 PM	6.43	14.66	222.06	341.44
3:58 PM	6.45	14.63	221.61	343.18
3:59 PM	6.41	14.64	222.07	344.43
4:00 PM	6.37	14.73	222.05	344.33
4:01 PM	6.44	14.76	221.51	343.30
4:02 PM	6.47	14.63	221.68	342.88
4:03 PM	6.47	14.58	221.46	344.46
4:04 PM	6.44	14.58	222.38	347.94
4:05 PM	6.45	14.50	222.67	345.61
4:06 PM	6.48	14.43	221.71	343.62
4:07 PM	6.42	14.43	223.27	345.21
4:08 PM	6.39	14.52	223.83	345.46
4:09 PM	6.35	14.63	224.59	342.76
4:10 PM	6.36	14.73	224.79	346.38
4:11 PM	6.37	14.70	224.73	344.96
4:12 PM	6.44	14.58	223.86	346.67
Average	6.43	14.62	222.71	343.64

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-STK-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 3-239
SAMPLING DATE	: 18/03/2026	SAMPLING TIME	: 11.30 a.m.-00.30 p.m.
RECEIVED DATE	: 24/03/2026	ANALYTICAL DATE	: 24-27/03/2026
REPORT DATE	: 30/03/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: 3-239-3-0024
STACK LOCATION	: Boiler#2 (UTM : 734412E, 1404952N)		
STACK DESCRIPTION			

Height	: 32.4	m	Flow Rate ⁽¹⁾	: 679.6	Ncu.m/min
Diameter	: 1.5	m	Excess Oxygen	: 4.49	%
Temperature	: 172.50	°C	Moisture Content	: 12.91	%
Gas Velocity	: 11.05	m/s			

PARAMETER	RESULTS ⁽¹⁾		EIA ⁽²⁾ / STANDARD ⁽³⁾	EMISSION RATE		REFERENCE METHOD
	mg/Ncu.m		mg/Ncu.m	g/s		
	4.49%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Particulate Matter (PM)	4.21	3.57	60/60	0.048	0.100	US. EPA Method 5

(Miss Pornnapa Budthum)

Analyst

REG.NO.3-239-3-0018

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.3-239-3-0010

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. ⁽¹⁾ At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.
 4. ⁽²⁾ Assigned value in the Report on Revision the Project Description in the EIA Report (No.12) of Refinery Plant, B.E. 2567 (2024).
 5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-CEMS-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: ๓-239
SAMPLING DATE	: 18/03/2026	SAMPLING TIME	: 11.00 a.m.-00.30 p.m.
RECEIVED DATE	: 30/03/2026	ANALYTICAL DATE	: 31/03/2026-11/05/2026
REPORT DATE	: 11/05/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: ๓-239-0024
STACK LOCATION	: Boiler#2 (UTM : 734412E, 1404952N)		

STACK DESCRIPTION

Height	: 32.4	m	Flow Rate ⁽¹⁾	: 679.6	Ncu.m/min
Diameter	: 1.5	m	Excess Oxygen	: 4.49	%
Temperature	: 172.50	°C	Moisture Content	: 12.91	%
Gas Velocity	: 11.05	m/s			

PARAMETER	RESULT ⁽¹⁾				EIA ⁽²⁾ / STANDARD ⁽³⁾		EMISSION RATE		REFERENCE METHOD
	ppm		mg/Ncu.m.		ppm	mg/Ncu.m.	g/s		
	4.49%O ₂	7%O ₂	4.49%O ₂	7%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Sulfur Dioxide (SO ₂)	2.72	2.30	7.12	6.02	60/60	157/157	0.081	0.500	US. EPA Method 6C
Oxide of Nitrogen (NO _x)	80.57	68.24	151.58	128.39	120/200	226/376	1.717	2.620	US. EPA Method 7E
Carbon Monoxide (CO)	0.99	0.84	1.13	0.96	100/690	115/790	0.013	0.200	US. EPA Method 10

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. ๓-239-๓-0006

(Miss Preeda Sonjai)

Technical Management Team

REG.NO. ๓-239-๓-0006

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5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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The Monitoring Result of Emission Concentration
Boiler 2
Star Petroleum Refining Public Co., Ltd.
March 18, 2026

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	4.58	4.52	81.34	81.40	69.08
2	4.54	4.49	80.35	80.41	68.11
3	4.51	4.46	79.84	79.89	67.55
Average	4.54	4.49	80.51	80.57	68.24

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	4.58	4.52	2.60	2.57	2.18
2	4.54	4.49	2.84	2.81	2.38
3	4.51	4.46	2.82	2.78	2.35
Average	4.54	4.49	2.75	2.72	2.30

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	4.58	4.52	0.86	0.84	0.71
2	4.54	4.49	1.07	1.05	0.89
3	4.51	4.46	1.09	1.08	0.91
Average	4.54	4.49	1.01	0.99	0.84



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 18, 2026	Run # :	1
Start time:	11:00 AM	Location :	Boiler 2
O ₂ instrument Model:	AMI 70	Finish time :	11:20 AM
NO _x instrument Model:	API 200 AH	Serial No.:	071023-47
SO ₂ instrument Model:	TELEDYNE 100 EH	Serial No.:	314
CO instrument Model:	API 300 A	Serial No.:	186
Fuel Type :	Natural Gas	Serial No.:	1070
		Test Operator :	Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
11:00 AM	4.55	81.08	2.28	0.83
11:01 AM	4.65	81.18	2.36	0.83
11:02 AM	4.48	81.49	2.39	0.82
11:03 AM	4.34	82.05	2.43	0.82
11:04 AM	4.45	81.86	2.49	0.82
11:05 AM	4.66	81.16	2.53	0.82
11:06 AM	4.64	81.13	2.54	0.82
11:07 AM	4.65	81.36	2.58	0.82
11:08 AM	4.66	81.49	2.60	0.81
11:09 AM	4.69	81.46	2.67	0.81
11:10 AM	4.64	81.55	2.74	0.81
11:11 AM	4.63	81.33	2.72	0.81
11:12 AM	4.60	81.23	2.72	0.81
11:13 AM	4.61	81.05	2.74	1.03
11:14 AM	4.63	81.28	2.71	1.10
11:15 AM	4.56	81.41	2.70	1.10
11:16 AM	4.56	81.58	2.68	0.90
11:17 AM	4.54	81.35	2.70	0.83
11:18 AM	4.53	81.05	2.68	0.80
11:19 AM	4.56	80.92	2.64	0.80
11:20 AM	4.53	81.04	2.66	0.80
Average	4.58	81.34	2.60	0.86

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 18, 2026	Run # :	2
Start time:	11:21 AM	Location :	Boiler 2
O ₂ instrument Model:	AMI 70	Finish time :	11:41 AM
NO _x instrument Model:	API 200 AH	Serial No.:	071023-47
SO ₂ instrument Model:	TELEDYNE 100 EH	Serial No.:	314
CO instrument Model:	API 300 A	Serial No.:	186
Fuel Type :	Natural Gas	Serial No.:	1070
		Test Operator :	Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
11:21 AM	5.12	80.79	2.71	0.94
11:22 AM	4.61	80.64	2.75	1.09
11:23 AM	4.37	81.03	2.77	1.08
11:24 AM	4.23	81.73	2.82	1.08
11:25 AM	4.42	81.59	2.86	1.08
11:26 AM	4.59	80.72	2.88	1.08
11:27 AM	4.54	80.40	2.88	1.08
11:28 AM	4.57	80.22	2.86	1.08
11:29 AM	4.44	80.41	2.86	1.08
11:30 AM	4.60	80.00	2.85	1.08
11:31 AM	4.66	79.68	2.86	1.08
11:32 AM	4.73	79.69	2.83	1.08
11:33 AM	4.71	79.69	2.83	1.08
11:34 AM	4.65	79.84	2.86	1.08
11:35 AM	4.45	80.30	2.89	1.08
11:36 AM	4.44	80.37	2.88	1.08
11:37 AM	4.50	79.99	2.87	1.08
11:38 AM	4.52	79.84	2.85	1.08
11:39 AM	4.43	79.95	2.84	1.08
11:40 AM	4.39	80.28	2.85	1.08
11:41 AM	4.47	80.14	2.85	1.08
Average	4.54	80.35	2.84	1.07

Signature

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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 18, 2026	Run # :	3
Start time:	11:42 AM	Location :	Boiler 2
O₂ instrument Model:	AMI 70	Finish time :	12:02 PM
NO_x instrument Model:	API 200 AH	Serial No.:	071023-47
SO₂ instrument Model:	TELEDYNE 100 EH	Serial No.:	314
CO instrument Model:	API 300 A	Serial No.:	186
Fuel Type :	Natural Gas	Serial No.:	1070
		Test Operator :	Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
11:42 AM	4.51	79.75	2.86	1.08
11:43 AM	4.59	79.19	2.84	1.09
11:44 AM	4.62	79.14	2.83	1.08
11:45 AM	4.53	79.44	2.84	1.09
11:46 AM	4.44	79.68	2.85	1.09
11:47 AM	4.47	79.60	2.83	1.09
11:48 AM	4.51	79.71	2.85	1.09
11:49 AM	4.58	79.66	2.87	1.09
11:50 AM	4.59	79.12	2.91	1.09
11:51 AM	4.60	78.86	2.86	1.09
11:52 AM	4.46	79.08	2.82	1.09
11:53 AM	4.36	79.79	2.76	1.09
11:54 AM	4.37	80.11	2.77	1.09
11:55 AM	4.49	80.05	2.78	1.09
11:56 AM	4.69	79.66	2.79	1.09
11:57 AM	4.65	79.77	2.80	1.09
11:58 AM	4.55	80.08	2.82	1.08
11:59 AM	4.44	80.66	2.78	1.08
12:00 PM	4.22	81.28	2.78	1.09
12:01 PM	4.37	81.32	2.77	1.09
12:02 PM	4.57	80.72	2.73	1.09
Average	4.51	79.84	2.82	1.09

Signature

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Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-STK-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: 3-239
SAMPLING DATE	: 19/03/2026	SAMPLING TIME	: 01.00-02.00 p.m.
RECEIVED DATE	: 24/03/2026	ANALYTICAL DATE	: 24-27/03/2026
REPORT DATE	: 30/03/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: 3-239-0-0024
STACK LOCATION	: HRSG#1 (UTM : 734515E, 1404960N)		
STACK DESCRIPTION			

Height	: 21.7	m	Flow Rate ⁽¹⁾	: 3,023	Ncu.m/min
Diameter	: 3.0	m	Excess Oxygen	: 14.10	%
Temperature	: 208.67	°C	Moisture Content	: 14.24	%
Gas Velocity	: 13.48	m/s			

PARAMETER	RESULTS ⁽¹⁾		EIA ⁽²⁾ / STANDARD ⁽³⁾	EMISSION RATE		REFERENCE METHOD
	mg/Ncu.m		mg/Ncu.m	g/s		
	14.10%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Particulate Matter (PM)	3.12	6.38	60/60	0.157	0.330	US. EPA Method 5



(Miss Pornnapa Budthum)

Analyst

REG.NO.3-239-0-0018



(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.3-239-0-0010

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 3. ⁽¹⁾ At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.
 4. ⁽²⁾ Assigned value in the Report on Revision the Project Description in the EIA Report (No.12) of Refinery Plant, B.E. 2567 (2024).
 5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226003-CEMS-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: ๓-239
SAMPLING DATE	: 19/03/2026	SAMPLING TIME	: 10.00 a.m.-02.00 p.m.
RECEIVED DATE	: 30/03/2026	ANALYTICAL DATE	: 31/03/2026-11/05/2026
REPORT DATE	: 11/05/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: Natural Gas + Refinery Fuel Gas	REGISTRATION NO.	: ๓-239-0024
STACK LOCATION	: HRS#1 (UTM : 734515E, 1404960N)		
STACK DESCRIPTION			

Height	: 21.7	m	Flow Rate ⁽¹⁾	: 3,023	Ncu.m/min
Diameter	: 3.0	m	Excess Oxygen	: 14.10	%
Temperature	: 208.67	°C	Moisture Content	: 14.24	%
Gas Velocity	: 13.48	m/s			

PARAMETER	RESULT ⁽¹⁾				EIA ⁽²⁾ / STANDARD ⁽³⁾		EMISSION RATE		REFERENCE METHOD
	ppm		mg/Ncu.m.		ppm		g/s		
	14.10%O ₂	7%O ₂	14.10%O ₂	7%O ₂	7%O ₂	7%O ₂	RESULT	EIA ⁽²⁾	
Sulfur Dioxide (SO ₂)	0.92	1.88	2.41	4.92	10/60	26/157	0.121	0.200	US. EPA Method 6C
Oxide of Nitrogen (NO _x)	60.38	123.43	113.60	232.22	160/200	301/376	5.723	5.750	US. EPA Method 7E
Carbon Monoxide (CO)	1.69	3.46	1.94	3.96	100/690	115/790	0.097	1.000	US. EPA Method 10

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

REG.NO. ๓-239-๓-0006

(Miss Preeda Somjai)

Technical Management Team

REG.NO. ๓-239-๓-0006

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

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

3. ⁽¹⁾ At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. ⁽²⁾ Assigned value in the Report on Revision the Project Description in the EIA Report (No.12) of Refinery Plant, B.E. 2567 (2024).

5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2554 (2011).



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**The Monitoring Result of Emission Concentration
HRSG 1
Star Petroleum Refining Public Co., Ltd.
March 19, 2026**

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	14.29	14.16	59.22	59.24	122.17
2	14.21	14.08	61.31	61.33	125.00
3	14.18	14.06	60.56	60.58	123.11
Average	14.23	14.10	60.36	60.38	123.43

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	14.29	14.16	1.17	1.13	2.33
2	14.21	14.08	0.95	0.92	1.88
3	14.18	14.06	0.74	0.71	1.44
Average	14.23	14.10	0.95	0.92	1.88

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	14.29	14.16	1.72	1.67	3.44
2	14.21	14.08	1.74	1.69	3.44
3	14.18	14.06	1.77	1.72	3.50
Average	14.23	14.10	1.74	1.69	3.46



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date:	March 19, 2026	Run # :	1
Start time:	10:00 AM	Location :	HRSG 1
O ₂ instrument Model:	AMI 70	Finish time :	10:20 AM
NO _x instrument Model:	API 200 AH	Serial No.:	071023-47
SO ₂ instrument Model:	TELEDYNE 100 EH	Serial No.:	314
CO instrument Model:	API 300 A	Serial No.:	186
Fuel Type :	Natural Gas	Serial No.:	1070
		Test Operator :	Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
10:00 AM	14.33	57.59	1.21	1.70
10:01 AM	14.35	57.58	1.22	1.71
10:02 AM	14.32	58.12	1.22	1.71
10:03 AM	14.33	58.59	1.22	1.71
10:04 AM	14.32	58.88	1.21	1.71
10:05 AM	14.33	59.18	1.22	1.71
10:06 AM	14.32	59.53	1.21	1.72
10:07 AM	14.33	59.73	1.20	1.72
10:08 AM	14.31	59.70	1.19	1.72
10:09 AM	14.30	59.64	1.20	1.72
10:10 AM	14.30	59.71	1.19	1.72
10:11 AM	14.30	59.76	1.17	1.72
10:12 AM	14.29	59.51	1.18	1.72
10:13 AM	14.27	59.22	1.16	1.72
10:14 AM	14.25	59.20	1.16	1.72
10:15 AM	14.26	59.36	1.14	1.72
10:16 AM	14.26	59.36	1.14	1.72
10:17 AM	14.25	59.41	1.12	1.72
10:18 AM	14.27	59.54	1.11	1.72
10:19 AM	14.25	59.85	1.09	1.72
10:20 AM	14.24	60.16	1.09	1.72
Average	14.29	59.22	1.17	1.72

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Date: March 19, 2026
Start time: 10:21 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: API 200 AH
SO₂ instrument Model: TELEDYNE 100 EH
CO instrument Model: API 300 A
Fuel Type : Natural Gas

Run # : 2
Location : HRSG 1
Finish time : 10:41 AM
Serial No.: 071023-47
Serial No.: 314
Serial No.: 186
Serial No.: 1070
Test Operator : Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
10:21 AM	14.26	60.62	1.07	1.72
10:22 AM	14.28	60.68	1.06	1.72
10:23 AM	14.25	60.61	1.04	1.72
10:24 AM	14.25	60.68	1.02	1.73
10:25 AM	14.24	61.08	1.02	1.73
10:26 AM	14.07	61.62	0.99	1.73
10:27 AM	14.15	61.69	1.00	1.73
10:28 AM	14.18	61.74	0.96	1.74
10:29 AM	14.23	61.89	0.97	1.74
10:30 AM	14.24	62.09	0.97	1.74
10:31 AM	14.21	61.96	0.96	1.74
10:32 AM	14.21	61.34	0.94	1.74
10:33 AM	14.21	61.43	0.92	1.75
10:34 AM	14.21	61.67	0.92	1.75
10:35 AM	14.21	61.85	0.92	1.75
10:36 AM	14.18	61.83	0.90	1.75
10:37 AM	14.20	61.42	0.87	1.75
10:38 AM	14.21	61.00	0.85	1.76
10:39 AM	14.20	60.87	0.84	1.76
10:40 AM	14.21	60.76	0.84	1.76
10:41 AM	14.21	60.62	0.84	1.76
Average	14.21	61.31	0.95	1.74

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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Star Petroleum Refining Public Co., Ltd. Emission Test Result

Run # : 3

Date: March 19, 2026

Location : HRSG 1

Start time: 10:42 AM

Finish time : 11:02 AM

O₂ instrument Model: AMI 70

Serial No.: 071023-47

NO_x instrument Model: API 200 AH

Serial No.: 314

SO₂ instrument Model: TELEDYNE 100 EH

Serial No.: 186

CO instrument Model: API 300 A

Serial No.: 1070

Fuel Type : Natural Gas

Test Operator : Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
10:42 AM	14.18	60.58	0.83	1.76
10:43 AM	14.18	60.55	0.82	1.76
10:44 AM	14.19	60.49	0.82	1.76
10:45 AM	14.21	60.47	0.79	1.76
10:46 AM	14.20	60.28	0.79	1.76
10:47 AM	14.18	60.12	0.79	1.76
10:48 AM	14.18	60.15	0.76	1.76
10:49 AM	14.18	60.48	0.76	1.76
10:50 AM	14.19	60.75	0.75	1.77
10:51 AM	14.18	60.52	0.74	1.77
10:52 AM	14.15	60.41	0.72	1.77
10:53 AM	14.15	60.45	0.73	1.77
10:54 AM	14.16	60.67	0.71	1.78
10:55 AM	14.16	60.63	0.71	1.78
10:56 AM	14.15	60.64	0.70	1.78
10:57 AM	14.16	60.71	0.70	1.78
10:58 AM	14.16	60.57	0.68	1.78
10:59 AM	14.18	60.62	0.68	1.78
11:00 AM	14.18	60.85	0.66	1.78
11:01 AM	14.18	61.07	0.66	1.78
11:02 AM	14.18	60.79	0.64	1.78
Average	14.18	60.56	0.74	1.77

Signature

Miss Katesarin Vorradetwittaya

Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REF. NO.	: 226003-STK-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: -
SAMPLING DATE	: 19/03/2026	SAMPLING TIME	: 02.40-03.40 p.m.
RECEIVED DATE	: 20/03/2026	ANALYTICAL DATE	: 23/03/2026
REPORT DATE	: 01/04/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Process	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: -	REGISTRATION NO.	: -
STACK LOCATION	: VRU Stack		

STACK DESCRIPTION

Height	: 10.0	m.	Velocity ⁽¹⁾	: 7.18	m/s
Diameter	: 0.254	m.	Flow Rate ⁽¹⁾	: 20.12	Nm ³ /min
Temperature ⁽¹⁾	: 36.0	°C	Excess Oxygen ⁽¹⁾	: 20.60	%

PARAMETER	UNIT	RESULTS		EIA ⁽²⁾	STANDARD ⁽³⁾	REFERENCE METHODS
		INLET	OUTLET			
TVOCs	ppm	30,808	544.50	-	-	US. EPA Method 25A
	mg/Ncu.m.	55,442	979.88	-	-	
	mg/l	55.44	0.98	15	17	
	g/s	-	0.329	1.212	-	

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. ⁽¹⁾ The data from VRU Outlet.

4. ⁽²⁾ Assigned value in the Report on Revision the Project Description in the EIA Report (No.12) of Refinery Plant, B.E. 2567 (2024).

5. ⁽³⁾ Notification of the Ministry of Natural Resources and Environment B.E. 2553 (2010).



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REF. NO.	: 226003-STK-2603-0098
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION NO.	: -
SAMPLING DATE	: 19/03/2026	SAMPLING TIME	: 02.40-03.40 p.m.
RECEIVED DATE	: 20/03/2026	ANALYTICAL DATE	: 23/03/2026
REPORT DATE	: 01/04/2026	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Process	SITE OPERATOR	: Mr. Kittipong Thakoengsuk
FUEL TYPE	: -	REGISTRATION NO.	: -
STACK LOCATION	: VRU Stack		

STACK DESCRIPTION

Height	: 10.0 m.	Velocity ⁽¹⁾	: 7.18 m/s
Diameter	: 0.254 m.	Flow Rate ⁽¹⁾	: 20.12 Nm ³ /min
Temperature ⁽¹⁾	: 36.0 °C	Excess Oxygen ⁽¹⁾	: 20.60 %

PARAMETER	UNIT	RESULTS		EIA ⁽²⁾	STANDARD	REFERENCE METHODS
		INLET	OUTLET			
Benzene	ppm	216.29	0.38	-	-	US. EPA Method 18
	mg/Ncu.m.	690.87	1.21	-	-	
	mg/l	0.69	0.0012	0.21	-	
	g/s	-	0.00041	0.017	-	

Sudaporn S.
(Miss Sudaporn Soonthorn)
Analyst

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)
Technical Management Team

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4. ⁽²⁾ Assigned value in the Report on Revision the Project Description in the EIA Report (No.12) of Refinery Plant, B.E. 2567 (2024).

ใบรับรองผลการตรวจวัดคุณภาพน้ำ



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0031/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 08/01/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/01/2026	SAMPLING TIME	: 10:33
ANALYTICAL DATE	: 09-19/01/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/01/2026		: ๓-239-๓-0005
SAMPLE CONDITION	: เหลือองศาไม้ตะกอน	FILE CODE	: 226003_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Near the refinery outfall	
Temperature	°C	2550 B	< 0.5	28.1	≤ 40
pH	-	4500-H ⁺ B	< 0.10	8.28	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	1,574	≤ 3,000
Total Suspended Solids	mg/l	2540 D	< 2.5	< 2.5	≤ 50
Sulfide	mg/l	4500-S ²⁻ F	< 0.20	ND	≤ 1
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5
Phenols	mg/l	5530 B,C	< 0.001	ND	≤ 1
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 D	< 10.00	32.02	≤ 120
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	≤ 0.25
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND	≤ 0.75
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๓-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๓-239-๓-0005

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

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3. ^{1/} Notification of the Ministry of Industry, Regarding Industrial Effluent Standards, B.E.2560 (2017).

4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0031/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/01/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/01/2026	SAMPLING TIME	: 10:33
ANALYTICAL DATE	: 12/01/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/01/2026		: -
SAMPLE CONDITION	: เหลือองใส่มีตะกอน	FILE CODE	: 226003_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD
				Near the refinery outfall	
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	0.12	-

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

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.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0204/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 06/02/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/02/2026	SAMPLING TIME	: 09:19
ANALYTICAL DATE	: 07-17/02/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 17/02/2026		: ๓-239-๓-0025
SAMPLE CONDITION	: ใสมีตะกอน	FILE CODE	: 226003_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Near the refinery outfall	
Temperature	°C	2550 B	< 0.5	29.7	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.63	5.5-9.0
Color	ADMI	2120 F	< 6.0	34.6	≤ 300
Total Dissolved Solids	mg/l	2540 C	< 25	1,554	≤ 3,000
Total Suspended Solids	mg/l	2540 D	< 2.5	3.6	≤ 50
Sulfide	mg/l	4500-S ²⁻ F	< 0.20	ND	≤ 1
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5
Phenols	mg/l	5530 B,C	< 0.001	ND	≤ 1
BOD ₅	mg/l	5210 B	< 1.0	1.2	≤ 20
COD	mg/l	5220 D	< 10.00	21.08	≤ 120
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND	≤ 0.75
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	≤ 0.25
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๓-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๓-239-๓-0005

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. ^{1/} Notification of the Ministry of Industry, Regulations on Effluent Standards for Factories B.E.2560 (2017).
 4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0204/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/02/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/02/2026	SAMPLING TIME	: 09:19
ANALYTICAL DATE	: 07-17/02/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 17/02/2026		: -
SAMPLE CONDITION	: ใสมีตะกอน	FILE CODE	: 226003_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Near the refinery outfall	
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	0.32	-

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

- Remark :**
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 3. ^{1/} Notification of the Ministry of Industry, Regulations on Effluent Standards for Factories B.E.2560 (2017).
 4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0404/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 06/03/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/03/2026	SAMPLING TIME	: 09:06
ANALYTICAL DATE	: 07-18/03/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/03/2026		: ๓-239-๓-0005
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Near the refinery outfall	
Temperature	°C	2550 B	< 0.5	33.1	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.45	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	806	≤ 3,000
Total Suspended Solids	mg/l	2540 D	< 2.5	4.2	≤ 50
Sulfide	mg/l	4500-S ²⁻ F	< 0.20	ND	≤ 1
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5
Phenols	mg/l	5530 B,C	< 0.001	ND	≤ 1
BOD ₅	mg/l	5210 B	< 1.0	1.9	≤ 20
COD	mg/l	5220 D	< 10.00	22.22	≤ 120
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND	≤ 0.75
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	≤ 0.25
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๓-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๓-239-๓-0005

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3. ^{1/} Notification of the Ministry of Industry, Regulations on Effluent Standards for Factories B.E.2560 (2017).

4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0404/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/03/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/03/2026	SAMPLING TIME	: 09:06
ANALYTICAL DATE	: 09/03/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/03/2026		: -
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Near the refinery outfall	
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	0.08	-

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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 4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0556/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 03/04/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 04/04/2026	SAMPLING TIME	: 10:37
ANALYTICAL DATE	: 04-20/04/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 20/04/2026		: ๓-239-๓-0007
SAMPLE CONDITION	: เหลืองใส	FILE CODE	: 226003_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Near the refinery outfall	
Temperature	°C	2550 B	< 0.5	32.6	≤ 40
pH	-	4500-H ⁺ B	< 0.10	8.32	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	1,362	≤ 3,000
Total Suspended Solids	mg/l	2540 D	< 2.5	5.8	≤ 50
Sulfide	mg/l	4500-S ²⁻ F	< 0.20	ND	≤ 1
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5
Phenols	mg/l	5530 B,C	< 0.001	ND	≤ 1
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 D	< 10.00	30.98	≤ 120
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND	≤ 0.75
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	≤ 0.25
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

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

Pornapa Budthum

(Miss Pornapa Budthum)

Analyst

REG. NO. ๓-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๓-239-๓-0005

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

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3. ^{1/} Notification of the Ministry of Industry, Regulations on Effluent Standards for Factories B.E.2560 (2017).

4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0556/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 03/04/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 04/04/2026	SAMPLING TIME	: 10:37
ANALYTICAL DATE	: 06/04/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 20/04/2026		: -
SAMPLE CONDITION	: เหลืองใส	FILE CODE	: 226003_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Near the refinery outfall	
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	0.13	-

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0767/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 08:40
ANALYTICAL DATE	: 09-18/05/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 18/05/2026		: ๓-239-๖-0027
SAMPLE CONDITION	: เหลืองใส	FILE CODE	: 226003_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Near the refinery outfall	
Temperature	°C	2550 B	< 0.5	32.6	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.20	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	1,964	≤ 3,000
Total Suspended Solids	mg/l	2540 D	< 2.5	34	≤ 50
Sulfide	mg/l	4500-S ²⁻ F	< 0.20	ND	≤ 1
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5
Phenols	mg/l	5530 B,C	< 0.001	ND	≤ 1
BOD ₅	mg/l	5210 B	< 1.0	1.4	≤ 20
COD	mg/l	5220 D	< 10.00	56.91	≤ 120
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.002	≤ 0.75
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	≤ 0.25
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๓-239-๖-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๓-239-๖-0005

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3. ^{1/} Notification of the Ministry of Industry, Regulations on Effluent Standards for Factories B.E.2560 (2017).

4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0767/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 08:40
ANALYTICAL DATE	: 13/05/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 18/05/2026		: -
SAMPLE CONDITION	: เหลืองใส	FILE CODE	: 226003_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Near the refinery outfall	
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	0.18	-

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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 4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0966/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 05/06/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 06/06/2026	SAMPLING TIME	: 09:00
ANALYTICAL DATE	: 06-17/06/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 17/06/2026		: ๓-239-๓-0027
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Near the refinery outfall	
Temperature	°C	2550 B	< 0.5	32.4	≤ 40
pH	-	4500-H ⁺ B	< 0.10	8.12	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	1,264	≤ 3,000
Total Suspended Solids	mg/l	2540 D	< 2.5	5.8	≤ 50
Sulfide	mg/l	4500-S ²⁻ F	< 0.20	ND	≤ 1
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5
Phenols	mg/l	5530 B,C	< 0.001	ND	≤ 1
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 D	< 10.00	33.52	≤ 120
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND	≤ 0.75
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	≤ 0.25
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๓-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๓-239-๓-0005

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 4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0966/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 05/06/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 06/06/2026	SAMPLING TIME	: 09:00
ANALYTICAL DATE	: 11/06/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 17/06/2026		: -
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Near the refinery outfall	
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	0.06	-

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



(Miss Pornnapa Budthum)

Analyst



(Miss Khemchuda Insorn)

Technical Management Team

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 4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0032/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/01/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/01/2026	SAMPLING TIME	: 12:46
ANALYTICAL DATE	: 09-19/01/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/01/2026		: -
SAMPLE CONDITION	: เหลือองใส่มีตะกอน	FILE CODE	: 226003_SW_January
SAMPLE DESCRIPTION	: 1 = Within IEAT drainage channel upstream from refinery outfall		

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ^{1/}
		METHODS	(non-detectable)	1	
Temperature	°C	2550 B	< 0.5	30.2	-
pH	-	4500-H ⁺ B	< 0.10	7.97	-
Total Dissolved Solids	mg/l	2540 C	< 25	6,740	-
Suspended Solids	mg/l	2540 D	< 2.5	19	-
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	1.8	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	-
Phenols	mg/l	5530 B,C	< 0.001	ND	-
BOD ₅	mg/l	5210 B	< 1.0	2.9	-
COD	mg/l	5220 D	< 10.00	22.66	-
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	-
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.003	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	-

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



(Miss Pornapa Budthum)

Analyst



(Miss Khemchuda Insorn)

Technical Management Team

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 3. ^{1/} Notification of the National Environment Board No.8 B.E.2537 (1994) for Surface Water Class 5.
 4. - Not available.



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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	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0203/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/02/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/02/2026	SAMPLING TIME	: 11:40
ANALYTICAL DATE	: 07-17/02/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 17/02/2026		: -
SAMPLE CONDITION	: ใสมีตะกอน	FILE CODE	: 226003_SW_February
SAMPLE DESCRIPTION	: 1 = Within IEAT drainage channel upstream from refinery outfall		

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ^{1/}
		METHODS	(non-detectable)	I	
Temperature	°C	2550 B	< 0.5	32.2	-
pH	-	4500-H ⁺ B	< 0.10	7.60	-
Total Dissolved Solids	mg/l	2540 C	< 25	4,088	-
Suspended Solids	mg/l	2540 D	< 2.5	47	-
Ammonia Nitrogen	mg/l	4500-NH3 B,C	< 0.02	3.0	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	-
Phenols	mg/l	5530 B,C	< 0.001	ND	-
BOD ₅	mg/l	5210 B	< 1.0	3.0	-
COD	mg/l	5220 D	< 10.00	42.70	-
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	-
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.022	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	-

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0405/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/03/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/03/2026	SAMPLING TIME	: 11:27
ANALYTICAL DATE	: 07-17/03/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 17/03/2026		: -
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_SW_March
SAMPLE DESCRIPTION	: 1 = Within IEAT drainage channel upstream from refinery outfall		

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ^{1/}
		METHODS	(non-detectable)	1	
Temperature	°C	2550 B	< 0.5	33.4	-
pH	-	4500-H ⁺ B	< 0.10	8.74	-
Total Dissolved Solids	mg/l	2540 C	< 25	5,872	-
Suspended Solids	mg/l	2540 D	< 2.5	14	-
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	3.3	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	-
Phenols	mg/l	5530 B,C	< 0.001	ND	-
BOD ₅	mg/l	5210 B	< 1.0	4.0	-
COD	mg/l	5220 D	< 10.00	25.56	-
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	-
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.001	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	-

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0557/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 03/04/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 04/04/2026	SAMPLING TIME	: 11:39
ANALYTICAL DATE	: 04-20/04/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 20/04/2026		: -
SAMPLE CONDITION	: เหลือองไสมิตะกอน	FILE CODE	: 226003_SW_April
SAMPLE DESCRIPTION	: 1 = Within IEAT drainage channel upstream from refinery outfall		

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ^{1/}
		METHODS	(non-detectable)	1	
Temperature	°C	2550 B	< 0.5	33.9	-
pH	-	4500-H ⁺ B	< 0.10	8.80	-
Total Dissolved Solids	mg/l	2540 C	< 25	3,712	-
Suspended Solids	mg/l	2540 D	< 2.5	13	-
Ammonia Nitrogen	mg/l	4500-NH3 B,C	< 0.02	1.8	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	-
Phenols	mg/l	5530 B,C	< 0.001	ND	-
BOD ₅	mg/l	5210 B	< 1.0	3.9	-
COD	mg/l	5220 D	< 10.00	36.96	-
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	-
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.006	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	-

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

Pornpa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0769/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 10:50
ANALYTICAL DATE	: 09-18/05/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 18/05/2026		: -
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_SW_May
SAMPLE DESCRIPTION	: 1 = Within IEAT drainage channel upstream from refinery outfall		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				1	
Temperature	°C	2550 B	< 0.5	31.1	-
pH	-	4500-H ⁺ B	< 0.10	7.53	-
Total Dissolved Solids	mg/l	2540 C	< 25	5,024	-
Suspended Solids	mg/l	2540 D	< 2.5	36	-
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	2.1	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	-
Phenols	mg/l	5530 B,C	< 0.001	ND	-
BOD ₅	mg/l	5210 B	< 1.0	1.9	-
COD	mg/l	5220 D	< 10.00	29.83	-
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	-
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.009	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	-

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0967/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 05/06/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 06/06/2026	SAMPLING TIME	: 11:20
ANALYTICAL DATE	: 06-17/06/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 17/06/2026		: -
SAMPLE CONDITION	: เหลืองใต้มีตะกอน	FILE CODE	: 226003_SW_June
SAMPLE DESCRIPTION	: 1 = Within IEAT drainage channel upstream from refinery outfall		

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ^{1/}
		METHODS	(non-detectable)	1	
Temperature	°C	2550 B	< 0.5	26.6	-
pH	-	4500-H ⁺ B	< 0.10	8.38	-
Total Dissolved Solids	mg/l	2540 C	< 25	4,024	-
Suspended Solids	mg/l	2540 D	< 2.5	42	-
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	2.6	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	-
Phenols	mg/l	5530 B,C	< 0.001	ND	-
BOD ₅	mg/l	5210 B	< 1.0	3.1	-
COD	mg/l	5220 D	< 10.00	33.52	-
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	-
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.016	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	-

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

Pornapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0032/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/01/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/01/2026	SAMPLING TIME	: 12:01
ANALYTICAL DATE	: 09-19/01/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/01/2026		: -
SAMPLE CONDITION	: เหลือไม่ถึงกะอน	FILE CODE	: 226003_SW_January
SAMPLE DESCRIPTION	: 2 = Within IEAT drainage channel downstream from refinery outfall		

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ^{1/}
		METHODS	(non-detectable)	2	
Temperature	°C	2550 B	< 0.5	30.6	-
pH	-	4500-H ⁺ B	< 0.10	8.26	-
Total Dissolved Solids	mg/l	2540 C	< 25	6,696	-
Suspended Solids	mg/l	2540 D	< 2.5	18	-
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	1.3	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	-
Phenols	mg/l	5530 B,C	< 0.001	ND	-
BOD ₅	mg/l	5210 B	< 1.0	2.9	-
COD	mg/l	5220 D	< 10.00	25.86	-
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	-
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.002	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	-

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

Pornapa Budthum

(Miss Pornapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0203/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/02/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/02/2026	SAMPLING TIME	: 11:58
ANALYTICAL DATE	: 07-17/02/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 17/02/2026		: -
SAMPLE CONDITION	: 18	FILE CODE	: 226003_SW_February
SAMPLE DESCRIPTION	: 2 = Within IEAT drainage channel downstream from refinery outfall		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				2	
Temperature	°C	2550 B	< 0.5	32.6	-
pH	-	4500-H ⁺ B	< 0.10	8.18	-
Total Dissolved Solids	mg/l	2540 C	< 25	3,676	-
Suspended Solids	mg/l	2540 D	< 2.5	38	-
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	2.3	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	-
Phenols	mg/l	5530 B,C	< 0.001	ND	-
BOD ₅	mg/l	5210 B	< 1.0	1.7	-
COD	mg/l	5220 D	< 10.00	19.46	-
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	-
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.011	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0009	-

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0405/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/03/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/03/2026	SAMPLING TIME	: 11:05
ANALYTICAL DATE	: 07-17/03/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 17/03/2026		: -
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_SW_March
SAMPLE DESCRIPTION	: 2 = Within IEAT drainage channel downstream from refinery outfall		

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ^{1/}
		METHODS	(non-detectable)	2	
Temperature	°C	2550 B	< 0.5	33.7	-
pH	-	4500-H ⁺ B	< 0.10	8.77	-
Total Dissolved Solids	mg/l	2540 C	< 25	5,164	-
Suspended Solids	mg/l	2540 D	< 2.5	12	-
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	2.6	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	-
Phenols	mg/l	5530 B,C	< 0.001	ND	-
BOD ₅	mg/l	5210 B	< 1.0	4.1	-
COD	mg/l	5220 D	< 10.00	33.33	-
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	-
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.007	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	-

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

Bongpa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0557/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 03/04/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 04/04/2026	SAMPLING TIME	: 11:00
ANALYTICAL DATE	: 04-20/04/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 20/04/2026		: -
SAMPLE CONDITION	: เหลือองใส่มีตะกอน	FILE CODE	: 226003_SW_April
SAMPLE DESCRIPTION	: 2 = Within IEAT drainage channel downstream from refinery outfall		

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ^{1/}
		METHODS	(non-detectable)	2	
Temperature	°C	2550 B	< 0.5	34.0	-
pH	-	4500-H ⁺ B	< 0.10	8.70	-
Total Dissolved Solids	mg/l	2540 C	< 25	3,708	-
Suspended Solids	mg/l	2540 D	< 2.5	13	-
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	4.4	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	-
Phenols	mg/l	5530 B,C	< 0.001	ND	-
BOD ₅	mg/l	5210 B	< 1.0	3.2	-
COD	mg/l	5220 D	< 10.00	34.78	-
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	-
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.003	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0009	-

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0769/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 11:25
ANALYTICAL DATE	: 09-18/05/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 18/05/2026		: -
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_SW_May
SAMPLE DESCRIPTION	: 2 = Within IEAT drainage channel downstream from refinery outfall		

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ^{1/}
		METHODS	(non-detectable)	2	
Temperature	°C	2550 B	< 0.5	33.6	-
pH	-	4500-H ⁺ B	< 0.10	7.57	-
Total Dissolved Solids	mg/l	2540 C	< 25	5,032	-
Suspended Solids	mg/l	2540 D	< 2.5	35	-
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	2.3	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	-
Phenols	mg/l	5530 B,C	< 0.001	ND	-
BOD ₅	mg/l	5210 B	< 1.0	2.2	-
COD	mg/l	5220 D	< 10.00	31.49	-
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	-
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.014	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	-

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

Pornp Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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

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3. ^{1/} Notification of the National Environment Board No.8 B.E.2537 (1994) for Surface Water Class 5.

4. n¹ means naturally but changing by no more than 3 °C.

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0967/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 05/06/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 06/06/2026	SAMPLING TIME	: 11:30
ANALYTICAL DATE	: 06-17/06/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 17/06/2026		: -
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_SW_June
SAMPLE DESCRIPTION	: 2 = Within IEAT drainage channel downstream from refinery outfall		

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ^{1/}
		METHODS	(non-detectable)	2	
Temperature	°C	2550 B	< 0.5	25.0	-
pH	-	4500-H ⁺ B	< 0.10	6.91	-
Total Dissolved Solids	mg/l	2540 C	< 25	3,338	-
Suspended Solids	mg/l	2540 D	< 2.5	24	-
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	2.2	-
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND	-
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	-
Phenols	mg/l	5530 B,C	< 0.001	ND	-
BOD ₅	mg/l	5210 B	< 1.0	2.2	-
COD	mg/l	5220 D	< 10.00	31.87	-
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND	-
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.021	-
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	-

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



(Miss Pornnapa Budthum)

Analyst



(Miss Khemchuda Insorn)

Technical Management Team

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 3. ^{1/} Notification of the National Environment Board No.8 B.E.2537 (1994) for Surface Water Class 5.
 4. ¹ means naturally but changing by no more than 3°C.
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0031/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 08/01/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/01/2026	SAMPLING TIME	: 11:25
ANALYTICAL DATE	: 09-19/01/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/01/2026		: ๖-239-๖-0005
SAMPLE CONDITION	: ค้างมีตะกอน	FILE CODE	: 226003_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				API Separator Effluent
Temperature	°C	2550 B	< 0.5	31.9
pH	-	4500-H ⁺ B	< 0.10	7.44
Total Dissolved Solids	mg/l	2540 C	< 25	1,450
Suspended Solids	mg/l	2540 D	< 2.5	149
Fat Oil & Grease	mg/l	5520 B	< 2.0	4.8
Phenols	mg/l	5530 B,D	< 0.10	1.9
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	2.8
BOD ₅	mg/l	5210 B	< 1.0	151
COD	mg/l	5220 D	< 10.00	618
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0545

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๖-239-๖-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๖-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0031/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/01/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/01/2026	SAMPLING TIME	: 11:25
ANALYTICAL DATE	: 12/01/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 20/01/2026		: -
SAMPLE CONDITION	: ค้างมีตะกอน	FILE CODE	: 226003_WW_January

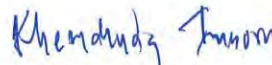
PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				API Separator Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	8.5

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



(Miss Pornnapa Budthum)

Analyst



(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0204/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 06/02/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/02/2026	SAMPLING TIME	: 09:57
ANALYTICAL DATE	: 07-17/02/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 17/02/2026		: ๓-239-๓-0025
SAMPLE CONDITION	: คำขุ่นมีตะกอน	FILE CODE	: 226003_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				API Separator Effluent
Temperature	°C	2550 B	< 0.5	30.9
pH	-	4500-H ⁺ B	< 0.10	8.20
Total Dissolved Solids	mg/l	2540 C	< 25	1,296
Suspended Solids	mg/l	2540 D	< 2.5	45
Fat Oil & Grease	mg/l	5520 B	< 2.0	12.9
Phenols	mg/l	5530 B,D	< 0.10	ND
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	3.9
BOD ₅	mg/l	5210 B	< 1.0	109
COD	mg/l	5220 D	< 10.00	390
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.079
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0102

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๓-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๓-239-๓-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0204/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/02/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/02/2026	SAMPLING TIME	: 09:57
ANALYTICAL DATE	: 10/02/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 17/02/2026		: -
SAMPLE CONDITION	: ดำขุ่นมีตะกอน	FILE CODE	: 226003_WW_February

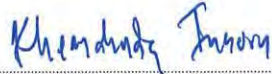
PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				API Separator Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	1.6

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



(Miss Pornnapa Budthum)

Analyst



(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0404/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 06/03/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/03/2026	SAMPLING TIME	: 09:46
ANALYTICAL DATE	: 07-18/03/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/03/2026		: ๓-239-๓-0005
SAMPLE CONDITION	: คำปูน	FILE CODE	: 226003_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				API Separator Effluent
Temperature	°C	2550 B	< 0.5	35.9
pH	-	4500-H ⁺ B	< 0.10	7.63
Total Dissolved Solids	mg/l	2540 C	< 25	1,030
Suspended Solids	mg/l	2540 D	< 2.5	59
Fat Oil & Grease	mg/l	5520 B	< 2.0	17.2
Phenols	mg/l	5530 B,D	< 0.10	1.2
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	6.1
BOD ₅	mg/l	5210 B	< 1.0	262
COD	mg/l	5220 D	< 10.00	566
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.010
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0086

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๓-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๓-239-๓-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0404/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/03/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/03/2026	SAMPLING TIME	: 09:46
ANALYTICAL DATE	: 09/03/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/03/2026		: -
SAMPLE CONDITION	: คำขุ่น	FILE CODE	: 226003_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				API Separator Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	17.1

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0556/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 03/04/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 04/04/2026	SAMPLING TIME	: 10:06
ANALYTICAL DATE	: 04-20/04/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 20/04/2026		: ๖-239-๖-0007
SAMPLE CONDITION	: ค้างคูน	FILE CODE	: 226003_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				API Separator Effluent
Temperature	°C	2550 B	< 0.5	34.3
pH	-	4500-H ⁺ B	< 0.10	7.68
Total Dissolved Solids	mg/l	2540 C	< 25	1,092
Suspended Solids	mg/l	2540 D	< 2.5	65
Fat Oil & Grease	mg/l	5520 B	< 2.0	32.4
Phenols	mg/l	5530 B,D	< 0.10	0.89
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	1.4
BOD ₅	mg/l	5210 B	< 1.0	42.0
COD	mg/l	5220 D	< 10.00	328
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.002
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0106

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๖-239-๖-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๖-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0556/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 03/04/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 04/04/2026	SAMPLING TIME	: 10:06
ANALYTICAL DATE	: 04/04/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 20/04/2026		: -
SAMPLE CONDITION	: คำนุ่น	FILE CODE	: 226003_WW_April

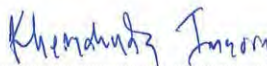
PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				API Separator Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	6.3

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



(Miss Pornnapa Budthum)

Analyst



(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0767/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 09:30
ANALYTICAL DATE	: 09-18/05/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 18/05/2026		: ๓-239-๓-0027
SAMPLE CONDITION	: ค้างุ่น	FILE CODE	: 226003_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				API Separator Effluent
Temperature	⁰ C	2550 B	< 0.5	33.7
pH	-	4500-H ⁺ B	< 0.10	8.13
Total Dissolved Solids	mg/l	2540 C	< 25	2,092
Suspended Solids	mg/l	2540 D	< 2.5	60
Fat Oil & Grease	mg/l	5520 B	< 2.0	20.9
Phenols	mg/l	5530 B,D	< 0.10	2.6
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND
BOD ₅	mg/l	5210 B	< 1.0	168
COD	mg/l	5220 D	< 10.00	459
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.007
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0100

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๓-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๓-239-๓-0005

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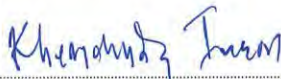
WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0767/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 09:30
ANALYTICAL DATE	: 13/05/2025	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 18/05/2026		: -
SAMPLE CONDITION	: คำปูน	FILE CODE	: 226003_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				API Separator Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	5.5

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


(Miss Pornnapa Budthum)
Analyst


(Miss Khemchuda Insorn)
Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0966/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 05/06/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 06/06/2026	SAMPLING TIME	: 09:35
ANALYTICAL DATE	: 06-17/06/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 17/06/2026	FILE CODE	: ๓-239-๓-0027
SAMPLE CONDITION	: ค่ำน้ำ		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				API Separator Effluent
Temperature	°C	2550 B	< 0.5	33.0
pH	-	4500-H ⁺ B	< 0.10	7.82
Total Dissolved Solids	mg/l	2540 C	< 25	1,296
Suspended Solids	mg/l	2540 D	< 2.5	130
Fat Oil & Grease	mg/l	5520 B	< 2.0	46.9
Phenols	mg/l	5530 B,D	< 0.10	1.7
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	1.6
BOD ₅	mg/l	5210 B	< 1.0	112
COD	mg/l	5220 D	< 10.00	452
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.008
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0179

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

Pornapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๓-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๓-239-๓-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0966/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 05/06/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 06/06/2026	SAMPLING TIME	: 09:35
ANALYTICAL DATE	: 11/06/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 17/06/2026		: -
SAMPLE CONDITION	: ดำขุ่น	FILE CODE	: 226003_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				API Separator Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	4.7

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

(Miss Pornnapa Budthum)

Analyst

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0031/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 08/01/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/01/2026	SAMPLING TIME	: 11:31
ANALYTICAL DATE	: 09-19/01/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/01/2026		: ๓-239-๓-0005
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				IAF Unit Effluent
Temperature	°C	2550 B	< 0.5	32.4
pH	-	4500-H ⁺ B	< 0.10	7.06
Total Dissolved Solids	mg/l	2540 C	< 25	1,456
Suspended Solids	mg/l	2540 D	< 2.5	62
Fat Oil & Grease	mg/l	5520 B	< 2.0	3.5
Phenols	mg/l	5530 B,D	< 0.10	1.8
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND
BOD ₅	mg/l	5210 B	< 1.0	79.0
COD	mg/l	5220 D	< 10.00	324
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0023

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๓-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๓-239-๓-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0031/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/01/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/01/2026	SAMPLING TIME	: 11:31
ANALYTICAL DATE	: 12/01/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 20/01/2026		: -
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				IAF Unit Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	7.4

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0204/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 06/02/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/02/2026	SAMPLING TIME	: 10:13
ANALYTICAL DATE	: 07-17/02/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 17/02/2026		: ๖-239-๖-0025
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				IAF Unit Effluent
Temperature	°C	2550 B	< 0.5	31.2
pH	-	4500-H ⁺ B	< 0.10	7.82
Total Dissolved Solids	mg/l	2540 C	< 25	1,350
Suspended Solids	mg/l	2540 D	< 2.5	24
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND
Phenols	mg/l	5530 B,D	< 0.10	ND
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	0.29
BOD ₅	mg/l	5210 B	< 1.0	32.6
COD	mg/l	5220 D	< 10.00	134
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.003
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0015

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๖-239-๖-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๖-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0204/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/02/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/02/2026	SAMPLING TIME	: 10:13
ANALYTICAL DATE	: 10/02/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 17/02/2026		: -
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				IAF Unit Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	1.1

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



(Miss Pornnapa Budthum)

Analyst



(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0404/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 06/03/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/03/2026	SAMPLING TIME	: 09:42
ANALYTICAL DATE	: 07-18/03/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/03/2026		: ๓-239-๓-0005
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				IAF Unit Effluent
Temperature	°C	2550 B	< 0.5	36.4
pH	-	4500-H ⁺ B	< 0.10	7.38
Total Dissolved Solids	mg/l	2540 C	< 25	1,044
Suspended Solids	mg/l	2540 D	< 2.5	30
Fat Oil & Grease	mg/l	5520 B	< 2.0	5.2
Phenols	mg/l	5530 B,D	< 0.10	0.78
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	0.64
BOD ₅	mg/l	5210 B	< 1.0	79.0
COD	mg/l	5220 D	< 10.00	186
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0018

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๓-239-๓-0018

Khemchuda Inorn

(Miss Khemchuda Inorn)

Technical Management Team

REG. NO. ๓-239-๓-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0404/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/03/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/03/2026	SAMPLING TIME	: 09:42
ANALYTICAL DATE	: 09/03/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/03/2026		: -
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				IAF Unit Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	16.7

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0556/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 03/04/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 04/04/2026	SAMPLING TIME	: 09:58
ANALYTICAL DATE	: 04-20/04/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 20/04/2026		: ๖-239-๓-0007
SAMPLE CONDITION	: เหลืองขุ่นเล็กน้อย	FILE CODE	: 226003_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				IAF Unit Effluent
Temperature	°C	2550 B	< 0.5	33.6
pH	-	4500-H ⁺ B	< 0.10	7.08
Total Dissolved Solids	mg/l	2540 C	< 25	1,154
Suspended Solids	mg/l	2540 D	< 2.5	26
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND
Phenols	mg/l	5530 B,D	< 0.10	0.76
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	0.31
BOD ₅	mg/l	5210 B	< 1.0	32.0
COD	mg/l	5220 D	< 10.00	228
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0012

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๖-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๓-0005

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WATER AND WASTEWATER ANALYSIS REPORT

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SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 03/04/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 04/04/2026	SAMPLING TIME	: 09:58
ANALYTICAL DATE	: 04/04/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 20/04/2026		: -
SAMPLE CONDITION	: เหลืองขุ่นเล็กน้อย	FILE CODE	: 226003_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				IAF Unit Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B.C	< 0.02	6.3

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0767/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 09:55
ANALYTICAL DATE	: 09-18/05/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 18/05/2026		: ๖-239-๖-0027
SAMPLE CONDITION	: เหลืองมีตะกอน	FILE CODE	: 226003_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				IAF Unit Effluent
Temperature	°C	2550 B	< 0.5	34.3
pH	-	4500-H ⁺ B	< 0.10	7.53
Total Dissolved Solids	mg/l	2540 C	< 25	1,886
Suspended Solids	mg/l	2540 D	< 2.5	4.0
Fat Oil & Grease	mg/l	5520 B	< 2.0	4.9
Phenols	mg/l	5530 B,D	< 0.10	2.5
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND
BOD ₅	mg/l	5210 B	< 1.0	75.4
COD	mg/l	5220 D	< 10.00	255
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0028

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๖-239-๖-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๖-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0767/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 09:55
ANALYTICAL DATE	: 13/05/2025	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 18/05/2026		: -
SAMPLE CONDITION	: เหลืองมีตะกอน	FILE CODE	: 226003_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				IAF Unit Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	4.9

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

(Miss Pornnapa Budthum)

Analyst

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0966/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 05/06/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 06/06/2026	SAMPLING TIME	: 09:40
ANALYTICAL DATE	: 06-17/06/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 17/06/2026		: ๖-239-๓-0027
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				IAF Unit Effluent
Temperature	°C	2550 B	< 0.5	33.9
pH	-	4500-H ⁺ B	< 0.10	6.98
Total Dissolved Solids	mg/l	2540 C	< 25	1,286
Suspended Solids	mg/l	2540 D	< 2.5	40
Fat Oil & Grease	mg/l	5520 B	< 2.0	3.6
Phenols	mg/l	5530 B,D	< 0.10	1.6
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	0.62
BOD ₅	mg/l	5210 B	< 1.0	39.6
COD	mg/l	5220 D	< 10.00	181
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.008
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0034

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๖-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๓-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0966/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 05/06/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 06/06/2026	SAMPLING TIME	: 09:40
ANALYTICAL DATE	: 11/06/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 17/06/2026		: -
SAMPLE CONDITION	: เหลือขุ่น	FILE CODE	: 226003_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				IAF Unit Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	4.8

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

(Miss Pornnapa Budthum)

Analyst

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0031/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 08/01/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/01/2026	SAMPLING TIME	: 10:48
ANALYTICAL DATE	: 09-19/01/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/01/2026		: ๖-239-๖-0005
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Equalization Tank Effluent
Temperature	°C	2550 B	< 0.5	34.9
pH	-	4500-H ⁺ B	< 0.10	9.56
Total Dissolved Solids	mg/l	2540 C	< 25	1,548
Suspended Solids	mg/l	2540 D	< 2.5	134
Fat Oil & Grease	mg/l	5520 B	< 2.0	6.2
Phenols	mg/l	5530 B,D	< 0.10	3.7
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	2.1
BOD ₅	mg/l	5210 B	< 1.0	78.0
COD	mg/l	5220 D	< 10.00	323
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0024

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๖-239-๖-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๖-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0031/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/01/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/01/2026	SAMPLING TIME	: 10:48
ANALYTICAL DATE	: 12/01/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 20/01/2026		: -
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Equalization Tank Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	7.4

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

Pornapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

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Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0204/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 06/02/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/02/2026	SAMPLING TIME	: 09:46
ANALYTICAL DATE	: 07-17/02/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 17/02/2026		: ๓-239-๓-0025
SAMPLE CONDITION	: น้ำดื่มมีตะกอน	FILE CODE	: 226003_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Equalization Tank Effluent
Temperature	°C	2550 B	< 0.5	32.1
pH	-	4500-H ⁺ B	< 0.10	8.67
Total Dissolved Solids	mg/l	2540 C	< 25	1,636
Suspended Solids	mg/l	2540 D	< 2.5	77
Fat Oil & Grease	mg/l	5520 B	< 2.0	4.2
Phenols	mg/l	5530 B,D	< 0.10	0.94
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	5.1
BOD ₅	mg/l	5210 B	< 1.0	108
COD	mg/l	5220 D	< 10.00	417
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.008
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0082

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๓-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๓-239-๓-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0204/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/02/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/02/2026	SAMPLING TIME	: 09:46
ANALYTICAL DATE	: 10/02/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 17/02/2026		: -
SAMPLE CONDITION	: คำนุ่นมีตะกอน	FILE CODE	: 226003_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Equalization Tank Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	17.8

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

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Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0404/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 06/03/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/03/2026	SAMPLING TIME	: 09:28
ANALYTICAL DATE	: 07-18/03/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/03/2026		: ๓-239-๓-0005
SAMPLE CONDITION	: ดำเนิน	FILE CODE	: 226003_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Equalization Tank Effluent
Temperature	⁰ C	2550 B	< 0.5	36.0
pH	-	4500-H ⁺ B	< 0.10	7.84
Total Dissolved Solids	mg/l	2540 C	< 25	1,394
Suspended Solids	mg/l	2540 D	< 2.5	95
Fat Oil & Grease	mg/l	5520 B	< 2.0	10.2
Phenols	mg/l	5530 B,D	< 0.10	1.0
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	9.1
BOD ₅	mg/l	5210 B	< 1.0	162
COD	mg/l	5220 D	< 10.00	276
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.005
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0085

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๓-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๓-239-๓-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0404/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/03/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/03/2026	SAMPLING TIME	: 09:28
ANALYTICAL DATE	: 09/03/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/03/2026		: -
SAMPLE CONDITION	: คำขุ่น	FILE CODE	: 226003_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Equalization Tank Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	39.2

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0556/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 03/04/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 04/04/2026	SAMPLING TIME	: 10:15
ANALYTICAL DATE	: 04-20/04/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 20/04/2026		: ๖-239-๓-0007
SAMPLE CONDITION	: คำปั่น	FILE CODE	: 226003_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Equalization Tank Effluent
Temperature	°C	2550 B	< 0.5	37.0
pH	-	4500-H ⁺ B	< 0.10	9.62
Total Dissolved Solids	mg/l	2540 C	< 25	1,272
Suspended Solids	mg/l	2540 D	< 2.5	60
Fat Oil & Grease	mg/l	5520 B	< 2.0	17.6
Phenols	mg/l	5530 B,D	< 0.10	3.2
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	7.0
BOD ₅	mg/l	5210 B	< 1.0	38.5
COD	mg/l	5220 D	< 10.00	331
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0124

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๖-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๓-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0556/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 03/04/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 04/04/2026	SAMPLING TIME	: 10:15
ANALYTICAL DATE	: 04/04/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 20/04/2026		: -
SAMPLE CONDITION	: คำขุ่น	FILE CODE	: 226003_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Equalization Tank Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	11.5

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

Pornnapa Budthum..

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0767/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 09:15
ANALYTICAL DATE	: 09-18/05/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 18/05/2026		: ๖-239-๓-0027
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Equalization Tank Effluent
Temperature	°C	2550 B	< 0.5	34.1
pH	-	4500-H ⁺ B	< 0.10	7.72
Total Dissolved Solids	mg/l	2540 C	< 25	1,924
Suspended Solids	mg/l	2540 D	< 2.5	54
Fat Oil & Grease	mg/l	5520 B	< 2.0	9.0
Phenols	mg/l	5530 B,D	< 0.10	2.5
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND
BOD ₅	mg/l	5210 B	< 1.0	160
COD	mg/l	5220 D	< 10.00	286
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.001
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0042

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

Pornnapa Budthum

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Analyst

REG. NO. ๖-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๓-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0767/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 09:15
ANALYTICAL DATE	: 13/05/2025	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 18/05/2026		: -
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Equalization Tank Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	4.4

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

(Miss Pornnapa Budthum)

Analyst

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0966/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 05/06/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 06/06/2026	SAMPLING TIME	: 09:30
ANALYTICAL DATE	: 06-17/06/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 17/06/2026		: ๓-239-๓-0027
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Equalization Tank Effluent
Temperature	°C	2550 B	< 0.5	34.9
pH	-	4500-H ⁺ B	< 0.10	10.23
Total Dissolved Solids	mg/l	2540 C	< 25	1,320
Suspended Solids	mg/l	2540 D	< 2.5	127
Fat Oil & Grease	mg/l	5520 B	< 2.0	12.7
Phenols	mg/l	5530 B,D	< 0.10	5.3
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	0.62
BOD ₅	mg/l	5210 B	< 1.0	117
COD	mg/l	5220 D	< 10.00	466
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	0.009
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0070

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๓-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๓-239-๓-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0966/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 05/06/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 06/06/2026	SAMPLING TIME	: 09:30
ANALYTICAL DATE	: 11/06/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 17/06/2026		: -
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_WW_June

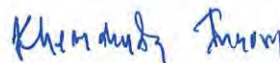
PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Equalization Tank Effluent
Ammonia Nitrogen	mg/l	4500-NH ₃ B,C	< 0.02	4.9

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



(Miss Pornnapa Budthum)

Analyst



(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0031/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 08/01/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/01/2026	SAMPLING TIME	: 10:39
ANALYTICAL DATE	: 09-19/01/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 20/01/2026		: ๖-239-๓-0005
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Biological Treatment Effluent
Temperature	°C	2550 B	< 0.5	31.6
pH	-	4500-H ⁺ B	< 0.10	7.64
Total Dissolved Solids	mg/l	2540 C	< 25	1,740
Suspended Solids	mg/l	2540 D	< 2.5	5.0
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND
Phenols	mg/l	5530 B,C	< 0.001	ND
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND
BOD ₅	mg/l	5210 B	< 1.0	< 1.0
COD	mg/l	5220 D	< 10.00	36.70
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๖-239-๓-0018

Khemchuda Insorn

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Technical Management Team

REG. NO. ๖-239-๓-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0031/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/01/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/01/2026	SAMPLING TIME	: 10:39
ANALYTICAL DATE	: 12/01/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 20/01/2026		: -
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_WW_January

PARAMETER	UNIT	ANALYSIS	ND	STATION
		METHODS	(non-detectable)	Biological Treatment Effluent
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	0.13

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

Pornapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0204/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 06/02/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/02/2026	SAMPLING TIME	: 09:34
ANALYTICAL DATE	: 07-17/02/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 17/02/2026		: ๓-239-๓-0025
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Biological Treatment Effluent
Temperature	⁰ C	2550 B	< 0.5	30.6
pH	-	4500-H ⁺ B	< 0.10	7.53
Total Dissolved Solids	mg/l	2540 C	< 25	1,608
Suspended Solids	mg/l	2540 D	< 2.5	10
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND
Phenols	mg/l	5530 B,C	< 0.001	ND
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND
BOD ₅	mg/l	5210 B	< 1.0	< 1.0
COD	mg/l	5220 D	< 10.00	23.24
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0006

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๓-239-๓-0018

Khemchuda Insorn

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Technical Management Team

REG. NO. ๓-239-๓-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0204/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/02/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/02/2026	SAMPLING TIME	: 09:34
ANALYTICAL DATE	: 10/02/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 17/02/2026		: -
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Biological Treatment Effluent
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	0.07

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

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Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0404/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 06/03/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/03/2026	SAMPLING TIME	: 09:14
ANALYTICAL DATE	: 07-18/03/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/03/2026		: ๓-239-๓-0005
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Biological Treatment Effluent
Temperature	⁰ C	2550 B	< 0.5	34.6
pH	-	4500-H ⁺ B	< 0.10	7.35
Total Dissolved Solids	mg/l	2540 C	< 25	1,338
Suspended Solids	mg/l	2540 D	< 2.5	5.6
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND
Phenols	mg/l	5530 B,C	< 0.001	ND
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND
BOD ₅	mg/l	5210 B	< 1.0	1.0
COD	mg/l	5220 D	< 10.00	23.33
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๓-239-๓-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๓-239-๓-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0404/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 06/03/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 07/03/2026	SAMPLING TIME	: 09:14
ANALYTICAL DATE	: 09/03/2026	SITE OPERATOR	: Mr. Baworn Deechaiya
REPORT DATE	: 19/03/2026		: -
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Biological Treatment Effluent
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	0.03

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

Pornapa Budthum

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

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Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0556/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 03/04/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 04/04/2026	SAMPLING TIME	: 10:26
ANALYTICAL DATE	: 04-20/04/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 20/04/2026	FILE CODE	: ๖-239-๓-0007
SAMPLE CONDITION	: เหลืองใสมีตะกอน		

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Biological Treatment Effluent
Temperature	°C	2550 B	< 0.5	36.0
pH	-	4500-H ⁺ B	< 0.10	7.58
Total Dissolved Solids	mg/l	2540 C	< 25	1,356
Suspended Solids	mg/l	2540 D	< 2.5	8.7
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND
Phenols	mg/l	5530 B,C	< 0.001	ND
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND
BOD ₅	mg/l	5210 B	< 1.0	< 1.0
COD	mg/l	5220 D	< 10.00	36.96
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0009

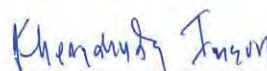
REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24th ED., 2023 (AWWA, APHA, WEF)



(Miss Pornnapa Budthum)

Analyst

REG. NO. ๖-239-๓-0018



(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๓-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0556/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 03/04/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 04/04/2026	SAMPLING TIME	: 10:26
ANALYTICAL DATE	: 04/04/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 20/04/2026		: -
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_WW_April

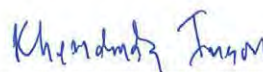
PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Biological Treatment Effluent
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	ND

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



(Miss Pornnapa Budthum)

Analyst



(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0767/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 09:00
ANALYTICAL DATE	: 09-18/05/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 18/05/2026		: ๖-239-๖-0027
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Biological Treatment Effluent
Temperature	°C	2550 B	< 0.5	34.8
pH	-	4500-H ⁺ B	< 0.10	7.17
Total Dissolved Solids	mg/l	2540 C	< 25	1,800
Suspended Solids	mg/l	2540 D	< 2.5	5.6
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND
Phenols	mg/l	5530 B,C	< 0.001	ND
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND
BOD ₅	mg/l	5210 B	< 1.0	1.1
COD	mg/l	5220 D	< 10.00	47.51
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND

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

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๖-239-๖-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๖-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0767/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 09:00
ANALYTICAL DATE	: 13/05/2025	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 18/05/2026		: -
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Biological Treatment Effluent
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	0.07

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


(Miss Pornnapa Budthum)
Analyst


(Miss Khemchuda Insorn)
Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0966/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 05/06/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 06/06/2026	SAMPLING TIME	: 09:10
ANALYTICAL DATE	: 06-17/06/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 17/06/2026		: ๖-239-๖-0027
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Biological Treatment Effluent
Temperature	⁰ C	2550 B	< 0.5	33.4
pH	-	4500-H ⁺ B	< 0.10	7.75
Total Dissolved Solids	mg/l	2540 C	< 25	1,298
Suspended Solids	mg/l	2540 D	< 2.5	6.5
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND
Phenols	mg/l	5530 B,C	< 0.001	ND
Sulfide as H ₂ S	mg/l	4500-S ²⁻ F	< 0.20	ND
BOD ₅	mg/l	5210 B	< 1.0	< 1.0
COD	mg/l	5220 D	< 10.00	35.16
Chromium Trivalent (Cr ³⁺)	mg/l	3113 B/Calculation	< 0.001	ND
Chromium Hexavalent (Cr ⁶⁺)	mg/l	3500-Cr B	< 0.01	ND
Mercury (Hg)	mg/l	3112 B	< 0.0005	0.0005

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

Bong Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG. NO. ๖-239-๖-0018

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๖-0005

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0966/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 05/06/2026	SAMPLING METHOD	: Grab
RECEIVED DATE	: 06/06/2026	SAMPLING TIME	: 09:10
ANALYTICAL DATE	: 11/06/2026	SITE OPERATOR	: Miss Thipsuda Wannakran
REPORT DATE	: 17/06/2026		: -
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION
				Biological Treatment Effluent
Ammonia Nitrogen	mg/l	Method 350.2	< 0.02	0.08

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



(Miss Pornnapa Budthum)

Analyst



(Miss Khemchuda Insorn)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No	: 0770/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Integrate
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 10:45
ANALYTICAL DATE	: 09-22/05/2026	SITE OPERATOR	: Mr. Chanapon Oakkharaplon
REPORT DATE	: 29/05/2026		: -
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_CW_May

PARAMETER	UNITS	ANALYSIS METHODS	ND (non-detectable)	SATATION	STANDARD ^{1/}
				Ko Saket	
Depth	m.	Measurement	-	2.5	-
Temperature	°C	2550 B	< 0.5	32.0	$\Delta \leq 2$
Transparency	m.	Secchi Disc	< 0.10	1.2	$\Delta \leq 10 \%$
pH	-	4500-H ⁺ B	-	8.17	7.0-8.5
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	-
Fat Oil & Grease	-	Visual Testing	-	NV	NV
Suspended Solid (SS)	mg/l	2540 D	< 2.5	16.0	^{2/}
Ammonia Nitrogen	µg/l	4500-NH ₃ F	< 10.0	15.4	-
Phenols	mg/l	5530 B-C	< 0.001	ND	≤ 0.03
Dissolved Oxygen	mg/l	4500-O G	< 0.10	6.30	≥ 4
BOD ₅	mg/l	5210 B	< 1.0	1.8	-
Salinity	ppt	2520 B	< 0.10	27.9	$\Delta \leq 10 \%$
Total Petroleum Hydrocarbon	µg/l	IOC/GGE(MSI)-III/3	< 0.10	ND	≤ 5
TOC [*]	mg/l	5310 B	< 0.01	1.18	-
Chromium Trivalent (Cr ³⁺)	µg/l	3113 B / Calculation	< 1.00	ND	-
Chromium Hexavalent (Cr ⁶⁺)	µg/l	3113 B	< 1.00	ND	≤ 50
Mercury (Hg)	µg/l	3112 B	< 0.05	ND	≤ 0.1

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

REFERENCE : Intergovernmental Oceanographic Commission of UNESCO (IOC), 1981

Bongpa Puthum.

(Miss Pornnapa Budthum)

Analyst

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

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Δ : Change from natural condition, $\leq$: Not more than, NV : Not visible, $\geq$: Not less than.

^{2/} The results should not be changed by more than the sum of daily average and the standard deviation.

Daily average was calculated from hourly measurement or at least 5 samples taken at equal time interval within one day.

4. *TOC analysis was performed by The Office of Public Health and Environmental Technology Services, Faculty of Public Health, Mahidol University.

5. - Not available .



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0770/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Integrate
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 10:20
ANALYTICAL DATE	: 09-22/05/2026	SITE OPERATOR	: Mr. Chanapon Oakkharaplon
REPORT DATE	: 29/05/2026		: -
SAMPLE CONDITION	: ใสมีตะกอน	FILE CODE	: 226003_CW_May

PARAMETER	UNITS	ANALYSIS METHODS	ND (non-detectable)	SATATION	STANDARD ^{1/}
				Had Sai Thong Beach	
Depth	m.	Measurement	-	2.7	-
Temperature	°C	2550 B	< 0.5	32.6	$\Delta \leq 1$
Transparency	m.	Secchi Disc	-	1.0	$\Delta \leq 10 \%$
pH	-	4500-H ⁺ B	< 0.10	7.94	7.0-8.5
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	-
Fat Oil & Grease	-	Visual Testing	-	NV	NV
Suspended Solid (SS)	mg/l	2540 D	< 2.5	24.0	^{2/}
Ammonia Nitrogen	µg/l	4500-NH ₃ F	< 10.0	48.6	-
Phenols	mg/l	5530 B-C	< 0.001	ND	≤ 0.03
Dissolved Oxygen	mg/l	4500-O G	< 0.10	4.90	≥ 4
BOD ₅	mg/l	5210 B	< 1.0	1.7	-
Salinity	ppt	2520 B	< 0.10	28.8	$\Delta \leq 10 \%$
Total Petroleum Hydrocarbon	µg/l	IOC/GGE(MSI)-III/3	< 0.10	0.44	≤ 5
TOC [*]	mg/l	5310 B	< 0.01	1.24	-
Chromium Trivalent (Cr ³⁺)	µg/l	3113 B / Calculation	< 1.00	ND	-
Chromium Hexavalent (Cr ⁶⁺)	µg/l	3113 B	< 1.00	ND	≤ 50
Mercury (Hg)	µg/l	3112 B	< 0.05	ND	≤ 0.1

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

REFERENCE : Intergovernmental Oceanographic Commission of UNESCO (IOC), 1981


(Miss Pornnapa Budthum)

Analyst


(Miss Khemchuda Insorn)

Technical Management Team

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5. - Not available .



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0770/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Integrate
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 10:35
ANALYTICAL DATE	: 09-22/05/2026	SITE OPERATOR	: Mr. Chanapon Oakkharaplon
REPORT DATE	: 29/05/2026		
SAMPLE CONDITION	: เหลืองขุ่น	FILE CODE	: 226003_CW_May

PARAMETER	UNITS	ANALYSIS METHODS	ND (non-detectable)	SATATION	STANDARD ^{1/}
				Wastewater Discharge Point of Refinery (IEAT)	
Depth	m.	Measurement	-	0.6	-
Temperature	°C	2550 B	< 0.5	32.8	$\Delta \leq 2$
Transparency	m.	Secchi Disc	-	0.4	$\Delta \leq 10 \%$
pH	-	4500-H ⁺ B	< 0.10	8.07	7.0-8.5
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	-
Fat Oil & Grease	-	Visual Testing	-	NV	NV
Suspended Solid (SS)	mg/l	2540 D	< 2.5	57.0	^{2/}
Ammonia Nitrogen	µg/l	4500-NH ₃ F	< 10.0	168	-
Phenols	mg/l	5530 B-C	< 0.001	ND	≤ 0.03
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.20	≥ 4
BOD ₅	mg/l	5210 B	< 1.0	2.1	-
Salinity	ppt	2520 B	< 0.10	21.4	$\Delta \leq 10 \%$
Chromium Trivalent (Cr ³⁺)	µg/l	3113 B / Calculation	< 1.00	ND	-
Chromium Hexavalent (Cr ⁶⁺)	µg/l	3113 B	< 1.00	ND	≤ 50
Mercury (Hg)	µg/l	3112 B	< 0.05	ND	≤ 0.1

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

REFERENCE : Intergovernmental Oceanographic Commission of UNESCO (IOC), 1981



(Miss Pornnapa Budthum)

Analyst



(Miss Khemchuda Insorn)

Technical Management Team

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^{2/} The results should not be changed by more than the sum of daily average and the standard deviation.

Daily average was calculated from hourly measurement or at least 5 samples taken at equal time interval within one day.

4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd	REQUEST SERVICE No	: 0770/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: -
SAMPLING DATE	: 08/05/2026	SAMPLING METHOD	: Integrate
RECEIVED DATE	: 09/05/2026	SAMPLING TIME	: 10:55
ANALYTICAL DATE	: 09-22/05/2026	SITE OPERATOR	: Mr. Chanapon Oakkharaplon
REPORT DATE	: 29/05/2026		: -
SAMPLE CONDITION	: ใสมีตะกอน	FILE CODE	: 226003_CW_May

PARAMETER	UNITS	ANALYSIS METHODS	ND (non-detectable)	SATATION	STANDARD ^{1/}
				Open Coastal Water	
Depth	m.	Measurement	-	4.5	-
Temperature	°C	2550 B	< 0.5	32.1	$\Delta \leq 2$
Transparency	m.	Secchi Disc	-	1.7	$\Delta \leq 10 \%$
pH	-	4500-H B	< 0.10	8.17	7.0-8.5
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	-
Fat Oil & Grease	-	Visual Testing	-	NV	NV
Suspended Solid (SS)	mg/l	2540 D	< 2.5	9.2	^{2/}
Ammonia Nitrogen	µg/l	4500-NH ₃ F	< 10.0	88.7	-
Phenols	mg/l	5530 B-C	< 0.001	ND	≤ 0.03
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.30	≥ 4
BOD ₅	mg/l	5210 B	< 1.0	1.4	-
Salinity	ppt	2520 B	< 0.10	28.0	$\Delta \leq 10 \%$
Total Petroleum Hydrocarbon	µg/l	IOC/GGE(MSI)-III/3	< 0.10	ND	≤ 5.0
TOC [*]	mg/l	5310 B	< 0.01	1.16	-
Chromium Trivalent (Cr ³⁺)	µg/l	3113 B / Calculation	< 1.00	ND	-
Chromium Hexavalent (Cr ⁶⁺)	µg/l	3113 B	< 1.00	ND	≤ 50
Mercury (Hg)	µg/l	3112 B	< 0.05	ND	≤ 0.1

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

REFERENCE : Intergovernmental Oceanographic Commission of UNESCO (IOC), 1981


(Miss Pornnapha Budthum)

Analyst



(Miss Khemchuda Insorn)

Technical Management Team

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

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

3. ^{1/} Notification of the National Environmental Board B.E. 2564 (2021) (Class 5).

Δ : Change from natural condition, $\leq$: Not more than, NV : Not visible, $\geq$: Not less than.

^{2/} The results should not be changed by more than the sum of daily average and the standard deviation.

Daily average was calculated from hourly measurement or at least 5 samples taken at equal time interval within one day.

4. *TOC analysis was performed by The Office of Public Health and Environmental Technology Services, Faculty of Public Health, Mahidol University.

5. - Not available .

ใบรับรองผลการตรวจวัดระดับเสียง



Noise Monitoring Result : Community Noise

MTR-SPRC PLC-Refinery

Location : Main Office Complex

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162B

Serial No : G301014

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 93.0/0.7

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	Equivalent Sound Pressure Level (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
14:00 - 15:00	57.9	54.8	54.0	56.4	54.2	55.5	54.3
15:00 - 16:00	58.1	56.7	57.7	56.3	56.0	56.4	56.4
16:00 - 17:00	58.2	58.1	56.5	56.7	57.7	58.2	57.8
17:00 - 18:00	56.8	56.3	57.6	55.8	56.3	57.1	57.0
18:00 - 19:00	56.2	57.8	56.6	55.9	56.3	56.7	56.6
19:00 - 20:00	55.5	55.5	56.4	55.8	55.4	55.8	56.4
20:00 - 21:00	52.9	51.8	55.2	54.5	53.3	53.1	53.7
21:00 - 22:00	52.4	52.7	54.4	53.9	52.5	54.4	52.7
22:00 - 23:00	53.4	53.3	53.0	54.2	52.5	54.5	53.0
23:00 - 00:00	53.3	53.4	53.6	54.3	52.9	53.9	53.1
00:00 - 01:00	53.7	52.9	53.4	53.5	53.0	53.7	53.7
01:00 - 02:00	53.5	52.5	52.5	53.8	53.7	60.4	53.2
02:00 - 03:00	53.0	52.1	52.9	54.0	53.9	54.6	52.4
03:00 - 04:00	52.8	51.7	52.6	53.2	54.2	54.2	53.6
04:00 - 05:00	52.9	53.1	52.4	53.9	53.7	54.5	51.3
05:00 - 06:00	54.2	55.5	53.8	55.5	55.4	55.3	53.7
06:00 - 07:00	58.0	56.7	55.1	56.7	56.7	57.2	58.0
07:00 - 08:00	58.6	57.4	56.8	57.4	60.0	59.0	60.5
08:00 - 09:00	56.9	56.6	56.4	56.7	59.0	56.8	60.0
09:00 - 10:00	58.1	56.5	56.7	56.9	59.3	57.1	58.4
10:00 - 11:00	58.5	56.3	58.1	56.9	59.5	56.9	58.5
11:00 - 12:00	56.8	55.9	55.3	56.2	58.7	56.5	57.4
12:00 - 13:00	57.4	56.9	56.8	56.9	59.4	57.1	57.6
13:00 - 14:00	57.0	63.8	56.6	56.9	59.4	57.1	57.6
Leq(24)*	56.2	56.4	55.5	55.7	56.7	56.4	56.4
Ldn	61.2	60.9	60.4	61.2	61.3	62.5	61.1
Lmax **	92.2	109.6	100.7	99.2	94.6	109.7	97.9
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 14:00-14:00

** Maximum Sound Pressure Level between 14:00-14:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-SPRC PLC-Refinery

Location : Main Office Complex

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162B

Serial No : G301014

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 93.0/0.7

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	L90 (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
14:00 - 15:00	56.1	52.9	51.6	53.7	52.6	52.8	52.3
15:00 - 16:00	56.1	54.3	52.4	54.2	53.2	54.7	54.1
16:00 - 17:00	55.3	54.8	54.7	55.2	55.1	55.7	54.9
17:00 - 18:00	54.5	54.2	54.4	54.6	54.3	55.4	55.1
18:00 - 19:00	54.4	54.2	54.9	54.6	54.2	55.3	55.1
19:00 - 20:00	54.2	53.9	55.1	54.7	54.2	54.6	55.0
20:00 - 21:00	50.1	49.7	52.8	52.9	51.9	50.5	51.9
21:00 - 22:00	51.2	51.1	52.7	52.6	50.7	51.2	51.5
22:00 - 23:00	51.6	52.0	51.9	53.1	51.1	52.9	51.7
23:00 - 00:00	52.1	52.1	52.6	53.1	51.8	52.7	52.0
00:00 - 01:00	52.0	51.7	52.3	52.5	51.8	52.7	52.7
01:00 - 02:00	52.5	51.1	51.2	52.7	52.4	52.8	52.2
02:00 - 03:00	51.9	51.2	51.6	52.8	52.7	53.0	51.4
03:00 - 04:00	51.9	50.8	51.4	52.2	53.0	53.2	50.5
04:00 - 05:00	51.8	52.2	51.2	52.7	52.7	53.5	50.1
05:00 - 06:00	52.0	52.3	51.9	53.2	52.8	53.6	51.2
06:00 - 07:00	53.1	53.0	52.1	53.7	53.0	54.0	53.1
07:00 - 08:00	55.3	54.3	53.4	55.2	57.2	55.9	57.8
08:00 - 09:00	55.4	55.1	55.1	55.7	57.2	55.4	57.3
09:00 - 10:00	55.9	55.3	55.1	55.9	57.6	55.7	57.1
10:00 - 11:00	56.3	54.8	55.5	55.8	57.8	55.8	57.0
11:00 - 12:00	55.2	54.1	53.8	55.0	56.3	54.9	55.3
12:00 - 13:00	55.9	55.2	55.1	55.7	57.5	55.8	55.9
13:00 - 14:00	55.6	52.9	55.7	54.6	57.0	55.2	56.2
L90(avg)*	54.2	53.3	53.5	54.2	54.7	54.3	54.4

Remark : * Average time between 14:00-14:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-SPRC PLC-Refinery

Location : Central Control Building

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR161B

Serial No : G301262

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 93.8/-0.1

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	Equivalent Sound Pressure Level (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
14:00 - 15:00	63.5	66.4	61.9	60.2	55.8	63.7	65.1
15:00 - 16:00	63.4	63.9	61.7	56.3	61.8	65.0	65.1
16:00 - 17:00	62.3	61.9	61.9	56.5	62.9	65.0	65.2
17:00 - 18:00	62.4	62.1	62.1	56.4	63.0	65.1	65.2
18:00 - 19:00	63.9	63.3	62.9	56.8	63.4	65.4	65.5
19:00 - 20:00	63.7	63.4	63.4	56.4	63.4	65.1	65.4
20:00 - 21:00	63.8	63.3	63.2	56.4	63.8	65.0	65.2
21:00 - 22:00	63.7	62.8	63.4	56.6	63.7	65.1	65.1
22:00 - 23:00	63.9	62.7	63.4	57.2	63.6	65.4	65.1
23:00 - 00:00	64.1	62.9	63.4	57.8	63.6	65.3	65.2
00:00 - 01:00	63.9	62.8	63.1	57.8	63.6	65.1	65.3
01:00 - 02:00	63.5	63.1	63.2	57.8	63.6	65.6	65.2
02:00 - 03:00	63.5	63.4	63.4	58.0	63.5	65.7	65.4
03:00 - 04:00	63.5	63.5	63.5	57.9	63.4	65.7	65.5
04:00 - 05:00	63.5	63.6	63.6	58.3	63.7	65.7	65.6
05:00 - 06:00	63.6	63.3	63.6	58.1	63.9	65.7	65.6
06:00 - 07:00	63.5	63.3	63.6	57.9	63.3	65.6	65.6
07:00 - 08:00	63.6	63.3	63.4	57.7	64.1	65.5	65.6
08:00 - 09:00	63.7	63.2	63.0	58.1	64.6	65.7	65.5
09:00 - 10:00	63.4	62.6	62.4	58.1	64.8	65.9	65.6
10:00 - 11:00	67.8	62.3	63.0	56.4	64.3	65.6	65.7
11:00 - 12:00	62.4	62.0	62.9	56.4	64.0	65.4	65.6
12:00 - 13:00	62.4	61.9	62.5	56.1	64.5	64.8	65.4
13:00 - 14:00	62.7	62.0	61.9	56.3	64.8	65.1	65.2
Leq(24)*	63.7	63.2	63.0	57.4	63.6	65.3	65.4
Ldn	70.1	69.6	69.7	64.2	70.0	71.9	71.8
Lmax **	106.2	110.8	94.6	107.2	104.0	95.4	90.3
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 14:00-14:00

** Maximum Sound Pressure Level between 14:00-14:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-SPRC PLC-Refinery

Location : Central Control Building

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR161B

Serial No : G301262

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 93.8/-0.1

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	L90 (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
14:00 - 15:00	62.6	61.9	61.1	54.5	54.9	56.1	64.5
15:00 - 16:00	62.0	61.5	61.1	55.4	55.2	64.4	64.5
16:00 - 17:00	61.6	61.4	61.4	55.6	62.2	64.5	64.5
17:00 - 18:00	61.7	61.5	61.5	55.6	62.2	64.5	64.5
18:00 - 19:00	63.1	62.3	61.9	55.8	62.6	64.8	64.8
19:00 - 20:00	63.3	62.8	62.6	55.6	62.4	64.5	64.9
20:00 - 21:00	63.3	62.7	62.6	55.6	63.1	64.5	64.9
21:00 - 22:00	63.1	62.2	62.9	55.7	63.0	64.5	64.8
22:00 - 23:00	63.3	62.2	62.9	56.3	62.9	64.8	64.8
23:00 - 00:00	63.5	62.3	62.9	57.0	62.8	64.8	64.9
00:00 - 01:00	63.2	62.2	62.6	57.1	62.8	64.6	65.0
01:00 - 02:00	63.0	62.6	62.6	57.1	62.9	64.6	64.9
02:00 - 03:00	62.9	62.9	62.8	57.2	62.8	65.3	64.9
03:00 - 04:00	62.9	62.9	62.8	57.1	62.7	65.2	65.2
04:00 - 05:00	63.0	63.0	63.0	57.5	63.0	65.2	65.3
05:00 - 06:00	63.0	62.8	63.0	57.3	62.5	65.2	65.3
06:00 - 07:00	62.9	62.7	62.9	57.0	62.5	65.1	65.4
07:00 - 08:00	62.8	62.8	62.8	56.9	63.2	64.9	65.4
08:00 - 09:00	62.9	62.2	62.1	56.8	63.3	64.9	65.2
09:00 - 10:00	62.7	61.9	61.8	56.3	63.5	65.1	65.2
10:00 - 11:00	62.1	61.7	62.2	55.4	63.0	64.9	65.3
11:00 - 12:00	61.7	61.4	62.3	55.5	63.2	64.7	65.2
12:00 - 13:00	61.8	61.3	61.7	55.3	63.7	64.3	65.1
13:00 - 14:00	61.8	61.3	61.1	55.4	63.5	64.4	64.9
L90(avg)*	62.7	62.2	62.3	56.3	62.6	64.6	65.0

Remark : * Average time between 14:00-14:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-SPRC PLC-Refinery

Location : Northern Refinery Boundary Station 1

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162B

Serial No : G302738

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 94.3/-0.6

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	Equivalent Sound Pressure Level (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
15:00 - 16:00	59.7	57.6	57.4	55.5	55.3	58.9	58.1
16:00 - 17:00	66.1	64.6	62.8	56.0	64.8	65.5	65.3
17:00 - 18:00	62.1	61.7	65.0	56.9	61.3	62.3	62.2
18:00 - 19:00	60.6	63.4	60.9	60.6	61.6	61.1	61.9
19:00 - 20:00	61.8	59.2	59.8	61.8	59.4	58.6	59.7
20:00 - 21:00	58.6	55.9	61.6	58.9	57.4	57.3	58.0
21:00 - 22:00	56.7	56.7	59.8	57.3	55.8	56.9	56.3
22:00 - 23:00	60.9	56.4	55.9	57.0	55.6	56.9	56.5
23:00 - 00:00	56.7	58.0	56.2	57.5	55.6	57.0	56.6
00:00 - 01:00	56.4	55.5	56.0	57.0	56.0	56.6	56.8
01:00 - 02:00	56.3	55.7	55.4	57.7	56.7	61.2	56.0
02:00 - 03:00	55.9	55.3	55.5	56.2	56.2	57.6	55.3
03:00 - 04:00	55.9	55.1	55.5	56.6	56.6	57.3	55.3
04:00 - 05:00	56.0	56.2	55.5	60.2	56.5	57.7	55.0
05:00 - 06:00	57.7	58.0	56.3	59.6	58.6	58.6	57.1
06:00 - 07:00	67.0	62.8	60.6	59.3	62.9	63.4	63.3
07:00 - 08:00	64.8	63.1	60.6	58.0	65.2	65.2	65.6
08:00 - 09:00	60.4	58.8	57.1	56.6	62.1	60.2	62.4
09:00 - 10:00	58.1	58.1	57.2	56.4	60.9	60.9	60.2
10:00 - 11:00	58.3	57.5	56.9	55.9	61.3	58.3	60.2
11:00 - 12:00	60.0	58.2	56.7	56.2	63.0	60.1	61.3
12:00 - 13:00	58.4	57.4	55.9	55.8	61.5	58.2	60.0
13:00 - 14:00	59.1	58.4	55.8	55.4	61.7	59.1	59.7
14:00 - 15:00	56.6	57.1	55.6	55.4	57.1	57.3	61.1
Leq(24)*	60.7	59.3	58.9	57.8	60.4	60.3	60.5
Ldn	66.7	64.6	63.7	64.5	65.0	65.8	65.0
Lmax **	110.1	106.4	107.9	92.0	109.0	103.9	106.4
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 15:00-15:00

** Maximum Sound Pressure Level between 15:00-15:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-SPRC PLC-Refinery

Location : Northern Refinery Boundary Station 1

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162B

Serial No : G302738

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 94.3/-0.6

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	L90 (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
15:00 - 16:00	56.0	54.4	55.0	54.8	54.5	55.5	54.4
16:00 - 17:00	55.5	54.8	55.1	55.1	55.8	56.2	55.1
17:00 - 18:00	54.1	54.5	54.9	55.3	54.6	56.3	55.4
18:00 - 19:00	54.1	54.6	55.7	56.4	54.7	56.0	55.6
19:00 - 20:00	54.2	53.7	56.2	57.1	54.5	54.9	55.5
20:00 - 21:00	53.7	53.4	55.7	55.8	54.4	53.7	55.3
21:00 - 22:00	55.0	54.2	55.5	55.3	53.8	54.8	55.0
22:00 - 23:00	55.1	54.7	54.6	55.0	54.0	55.6	55.2
23:00 - 00:00	55.4	54.9	55.1	55.1	54.5	55.4	55.4
00:00 - 01:00	55.3	54.5	54.8	54.9	54.7	55.4	55.7
01:00 - 02:00	55.2	54.3	54.2	55.2	55.0	55.6	55.0
02:00 - 03:00	54.9	54.4	54.4	54.6	55.0	56.3	54.2
03:00 - 04:00	54.9	54.1	54.4	55.0	55.3	56.2	54.2
04:00 - 05:00	54.8	55.0	54.1	55.5	55.2	56.5	53.6
05:00 - 06:00	55.2	55.0	54.5	55.3	55.2	56.7	54.6
06:00 - 07:00	56.6	55.9	55.0	55.7	56.1	57.2	56.7
07:00 - 08:00	57.1	55.2	54.7	55.6	59.1	57.6	60.5
08:00 - 09:00	56.0	54.5	54.7	54.8	58.0	56.1	58.6
09:00 - 10:00	55.6	54.1	54.5	55.1	58.3	56.2	56.9
10:00 - 11:00	55.5	54.1	54.6	54.9	58.0	56.0	57.5
11:00 - 12:00	55.0	54.3	54.3	55.2	58.4	55.9	56.8
12:00 - 13:00	54.5	54.3	55.2	55.0	58.6	54.3	56.1
13:00 - 14:00	54.3	55.2	55.0	54.5	57.4	53.7	56.0
14:00 - 15:00	53.7	54.9	54.9	54.6	54.1	53.6	55.6
L90(avg)*	55.2	54.6	54.9	55.3	56.1	55.8	56.1

Remark : * Average time between 15:00-15:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-SPRC PLC-Refinery

Location : Northern Refinery Boundary Station 2

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR161B

Serial No : G301329

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 94.7/-1.0

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	Equivalent Sound Pressure Level (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
15:00 - 16:00	57.8	55.1	55.4	55.2	56.0	55.2	55.2
16:00 - 17:00	56.7	57.6	58.6	55.3	56.7	57.4	56.8
17:00 - 18:00	55.0	55.2	54.4	53.9	54.1	55.0	54.7
18:00 - 19:00	54.9	54.9	55.0	54.0	54.4	55.1	55.5
19:00 - 20:00	54.3	54.1	55.2	54.4	54.2	53.9	54.3
20:00 - 21:00	54.0	53.6	54.4	55.0	53.6	53.1	54.2
21:00 - 22:00	54.4	54.0	54.2	53.9	52.7	54.5	53.5
22:00 - 23:00	54.2	53.8	54.0	54.5	51.6	54.2	53.4
23:00 - 00:00	54.5	54.7	54.2	54.3	52.3	54.7	53.8
00:00 - 01:00	54.8	53.0	54.5	54.2	52.4	54.0	54.2
01:00 - 02:00	54.9	52.7	52.6	54.2	52.9	58.0	53.9
02:00 - 03:00	54.8	53.7	53.3	54.2	53.8	54.8	56.6
03:00 - 04:00	54.8	53.6	53.3	53.5	53.6	54.3	52.6
04:00 - 05:00	54.9	54.7	53.7	54.7	54.5	54.8	54.1
05:00 - 06:00	56.2	56.6	56.3	64.9	56.1	56.9	57.9
06:00 - 07:00	57.3	56.3	54.9	58.1	56.6	57.7	60.3
07:00 - 08:00	56.7	56.7	55.2	56.8	58.3	56.3	59.8
08:00 - 09:00	56.5	55.3	54.2	56.8	57.6	56.2	58.4
09:00 - 10:00	55.7	56.1	54.2	56.5	59.8	55.9	57.1
10:00 - 11:00	55.7	55.8	55.2	56.2	58.5	55.9	58.5
11:00 - 12:00	55.6	56.3	55.6	56.2	58.9	55.9	57.8
12:00 - 13:00	54.8	55.8	55.7	55.4	59.3	54.9	57.2
13:00 - 14:00	55.2	56.6	53.6	56.7	58.2	54.8	57.7
14:00 - 15:00	54.9	56.5	54.1	55.6	54.2	55.1	59.5
Leq(24)*	55.5	55.3	54.8	56.6	56.1	55.5	56.7
Ldn	61.7	61.1	60.8	64.1	61.0	62.1	62.6
Lmax **	88.6	92.0	105.3	100.5	100.7	88.7	106.8
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 15:00-15:00

** Maximum Sound Pressure Level between 15:00-15:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-SPRC PLC-Refinery

Location : Northern Refinery Boundary Station 2

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR161B

Serial No : G301329

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 94.7/-1.0

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	L90 (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
15:00 - 16:00	54.2	53.4	53.8	53.1	53.6	53.5	53.3
16:00 - 17:00	53.4	53.5	53.4	53.6	53.7	54.1	53.2
17:00 - 18:00	53.1	53.0	52.3	52.1	51.6	53.4	53.2
18:00 - 19:00	53.0	52.6	53.2	52.7	51.3	53.1	53.2
19:00 - 20:00	52.6	52.1	53.3	52.9	52.3	52.5	52.9
20:00 - 21:00	52.3	52.3	52.9	53.2	51.8	51.7	53.0
21:00 - 22:00	53.0	52.5	52.9	52.6	50.9	52.1	52.2
22:00 - 23:00	53.1	51.8	52.7	53.3	50.0	52.9	52.2
23:00 - 00:00	53.4	53.3	52.7	53.0	50.9	53.3	52.5
00:00 - 01:00	53.3	51.5	53.1	52.7	51.1	52.6	53.0
01:00 - 02:00	53.7	50.8	50.5	52.9	51.4	53.4	52.4
02:00 - 03:00	53.4	52.3	51.7	52.9	51.6	52.9	52.0
03:00 - 04:00	53.6	52.1	51.6	52.3	51.3	52.9	51.0
04:00 - 05:00	53.4	53.4	52.1	53.3	53.0	53.2	51.2
05:00 - 06:00	53.8	53.0	52.8	54.4	53.8	53.8	53.4
06:00 - 07:00	54.5	53.1	52.6	54.6	53.6	54.2	54.1
07:00 - 08:00	54.3	53.6	52.2	54.4	55.9	54.1	57.2
08:00 - 09:00	54.8	53.6	52.6	54.2	55.3	53.9	56.2
09:00 - 10:00	54.2	54.4	52.8	54.7	56.6	54.0	55.0
10:00 - 11:00	54.3	54.1	53.0	54.1	55.9	54.2	56.2
11:00 - 12:00	53.8	54.3	53.2	54.0	56.0	54.0	55.7
12:00 - 13:00	53.2	54.3	51.8	53.6	57.1	53.1	55.1
13:00 - 14:00	53.3	54.5	50.6	54.4	54.0	52.1	55.6
14:00 - 15:00	53.2	54.5	51.4	53.9	52.0	53.3	55.5
L90(avg)*	53.6	53.2	52.5	53.5	53.6	53.3	54.0

Remark : * Average time between 15:00-15:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-SPRC PLC-Refinery

Location : Northern Refinery Boundary Station 3

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162C

Serial No : G301029

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 94.8/-1.1

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	Equivalent Sound Pressure Level (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
14:00 - 15:00	67.3	60.0	65.2	68.2	64.3	57.0	57.4
15:00 - 16:00	64.3	61.1	64.7	63.1	61.9	57.9	57.5
16:00 - 17:00	61.6	61.1	61.3	61.5	58.0	58.5	58.5
17:00 - 18:00	60.2	59.8	59.9	59.3	57.4	58.4	58.7
18:00 - 19:00	60.9	58.6	62.7	59.4	57.2	58.5	58.7
19:00 - 20:00	60.0	58.5	62.7	59.1	58.0	58.3	58.6
20:00 - 21:00	62.3	58.0	60.8	59.8	57.7	58.0	58.3
21:00 - 22:00	60.8	59.7	61.7	58.9	57.4	58.4	57.9
22:00 - 23:00	62.2	60.1	59.6	61.4	56.9	58.4	58.2
23:00 - 00:00	62.7	60.5	60.2	60.6	57.8	57.8	58.6
00:00 - 01:00	60.8	59.0	62.2	58.6	57.3	57.6	58.3
01:00 - 02:00	61.7	58.1	59.0	60.8	57.4	58.3	58.2
02:00 - 03:00	61.6	59.0	58.5	59.7	57.6	58.4	58.2
03:00 - 04:00	60.0	58.7	58.6	58.5	57.5	58.3	57.9
04:00 - 05:00	58.2	59.2	58.5	59.5	57.7	59.0	57.7
05:00 - 06:00	58.0	59.1	58.5	59.7	58.1	58.7	58.3
06:00 - 07:00	58.7	59.4	58.4	60.6	58.9	59.4	61.6
07:00 - 08:00	60.9	59.0	59.6	62.5	63.5	59.2	64.4
08:00 - 09:00	61.2	59.2	60.6	62.5	62.5	58.5	63.5
09:00 - 10:00	61.9	60.4	60.6	64.7	62.8	58.0	62.5
10:00 - 11:00	64.7	61.1	60.3	62.6	62.1	58.0	60.1
11:00 - 12:00	63.5	61.9	61.8	59.9	62.7	58.0	60.0
12:00 - 13:00	64.0	63.3	64.0	60.6	63.0	57.4	59.8
13:00 - 14:00	63.5	65.5	68.5	64.8	62.4	56.9	60.0
Leq(24)*	62.3	60.4	62.0	61.9	60.4	58.2	59.8
Ldn	67.6	66.0	66.6	66.9	64.9	64.8	65.4
Lmax **	106.1	104.6	108.5	111.4	102.9	100.6	94.1
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 14:00-14:00

** Maximum Sound Pressure Level between 14:00-14:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-SPRC PLC-Refinery

Location : Northern Refinery Boundary Station 3

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162C

Serial No : G301029

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 94.8/-1.1

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	L90 (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
14:00 - 15:00	59.2	56.0	57.5	55.4	56.2	54.2	55.5
15:00 - 16:00	58.8	56.5	57.2	56.6	55.9	56.0	55.7
16:00 - 17:00	56.4	56.5	56.7	56.9	55.8	56.5	56.4
17:00 - 18:00	56.5	56.3	56.4	56.3	54.9	56.4	56.9
18:00 - 19:00	57.0	56.2	57.0	56.3	55.1	56.6	56.9
19:00 - 20:00	57.0	56.1	57.1	55.7	56.2	56.7	57.0
20:00 - 21:00	57.2	56.0	56.6	55.7	56.0	56.3	56.8
21:00 - 22:00	57.4	56.3	56.4	55.3	55.5	56.6	56.3
22:00 - 23:00	57.3	56.5	56.2	55.4	55.2	56.7	56.5
23:00 - 00:00	57.3	56.5	56.3	56.0	56.2	56.2	56.8
00:00 - 01:00	56.7	56.1	56.3	55.4	55.8	55.9	56.6
01:00 - 02:00	56.4	55.8	56.1	55.6	55.9	56.0	56.5
02:00 - 03:00	56.2	56.7	56.3	56.0	56.0	56.6	56.4
03:00 - 04:00	56.1	56.5	56.6	56.1	55.8	56.6	56.0
04:00 - 05:00	56.0	56.2	56.6	56.5	56.1	57.1	55.9
05:00 - 06:00	56.1	56.4	56.7	56.7	56.3	56.8	56.6
06:00 - 07:00	56.2	56.5	56.2	56.9	56.3	57.2	57.4
07:00 - 08:00	57.4	56.5	56.0	57.5	59.9	57.2	60.9
08:00 - 09:00	57.1	56.2	55.9	57.2	59.1	56.5	60.1
09:00 - 10:00	56.8	56.7	56.4	57.2	59.3	56.3	58.9
10:00 - 11:00	56.8	56.6	56.3	56.4	58.5	56.2	58.2
11:00 - 12:00	56.9	57.0	56.7	55.8	59.2	56.1	58.1
12:00 - 13:00	56.7	57.0	55.9	55.7	59.8	55.4	57.8
13:00 - 14:00	57.1	57.6	55.0	56.5	56.6	54.9	58.2
L90(avg)*	57.0	56.5	56.5	56.3	57.0	56.3	57.4

Remark : * Average time between 14:00-14:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-SPRC PLC-Refinery

Location : Eastern Refinery Boundary

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162B

Serial No : G302741

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 93.3/0.4

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	Equivalent Sound Pressure Level (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
14:00 - 15:00	49.6	51.3	50.5	52.3	51.1	50.6	50.4
15:00 - 16:00	48.7	51.8	50.3	52.0	50.5	52.0	50.3
16:00 - 17:00	50.3	52.9	49.6	51.4	49.2	49.9	49.7
17:00 - 18:00	50.4	54.4	49.4	50.8	49.3	48.7	49.6
18:00 - 19:00	51.6	55.5	49.9	49.6	52.6	51.8	51.0
19:00 - 20:00	51.5	55.4	52.1	48.7	53.2	54.0	52.0
20:00 - 21:00	51.1	55.1	53.3	49.0	52.1	54.5	53.2
21:00 - 22:00	47.4	53.8	53.7	50.5	49.8	55.2	53.7
22:00 - 23:00	49.4	52.0	53.6	51.7	48.6	55.9	53.6
23:00 - 00:00	50.1	50.4	53.0	51.5	49.4	55.7	53.1
00:00 - 01:00	49.7	49.5	51.6	51.2	50.4	54.1	53.1
01:00 - 02:00	50.7	49.2	47.8	50.8	52.1	52.7	51.8
02:00 - 03:00	53.9	50.5	49.7	48.6	53.3	52.9	50.8
03:00 - 04:00	54.8	50.8	50.9	49.4	54.5	51.6	47.1
04:00 - 05:00	54.6	51.2	50.5	51.6	55.1	52.1	48.9
05:00 - 06:00	53.6	51.0	50.5	49.2	55.6	52.6	51.0
06:00 - 07:00	53.0	50.7	51.7	48.3	55.7	52.4	52.2
07:00 - 08:00	51.1	50.2	53.0	47.4	55.8	52.0	53.0
08:00 - 09:00	48.8	49.2	53.9	47.0	54.9	51.6	53.2
09:00 - 10:00	47.2	48.1	54.1	46.6	54.2	51.8	54.7
10:00 - 11:00	45.4	50.8	54.0	46.1	52.7	51.9	53.9
11:00 - 12:00	47.4	50.7	53.2	45.9	51.3	51.8	53.4
12:00 - 13:00	48.5	50.6	53.3	50.6	49.7	51.2	53.8
13:00 - 14:00	51.5	50.8	52.9	51.2	48.9	49.9	53.3
Leq(24)*	51.1	52.0	52.1	50.0	52.7	52.7	52.3
Ldn	58.8	57.4	57.9	56.8	59.7	59.8	58.3
Lmax **	74.1	74.2	73.5	73.2	72.0	72.0	72.3
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 14:00-14:00

** Maximum Sound Pressure Level between 14:00-14:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-SPRC PLC-Refinery

Location : Eastern Refinery Boundary

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162B

Serial No : G302741

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 93.3/0.4

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	L90 (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
14:00 - 15:00	48.8	48.9	49.8	51.2	50.3	48.7	49.4
15:00 - 16:00	48.1	48.7	49.3	47.6	49.3	50.8	49.5
16:00 - 17:00	49.0	51.4	49.3	50.1	49.0	45.2	49.5
17:00 - 18:00	49.1	54.1	49.1	50.3	49.0	44.8	49.4
18:00 - 19:00	51.4	54.7	49.4	49.0	51.9	50.4	50.2
19:00 - 20:00	50.9	54.7	50.6	48.5	52.7	52.9	51.2
20:00 - 21:00	50.4	54.6	52.7	48.6	47.3	54.0	52.8
21:00 - 22:00	45.3	52.6	53.5	49.4	46.0	54.8	53.6
22:00 - 23:00	44.7	51.2	53.3	51.5	44.7	55.4	53.2
23:00 - 00:00	49.8	49.7	52.4	51.3	44.8	55.0	52.7
00:00 - 01:00	49.5	49.1	48.8	51.1	50.1	53.0	52.7
01:00 - 02:00	49.5	48.9	44.8	50.5	50.4	51.7	49.9
02:00 - 03:00	52.7	49.9	44.7	48.3	51.6	52.0	47.3
03:00 - 04:00	54.6	50.3	50.6	48.5	54.0	50.8	45.1
04:00 - 05:00	54.4	51.1	50.3	50.7	54.7	51.7	44.8
05:00 - 06:00	52.9	50.8	50.2	48.7	55.3	52.4	50.5
06:00 - 07:00	52.6	50.5	50.8	47.8	55.4	52.1	51.0
07:00 - 08:00	46.6	49.9	51.7	47.0	55.5	51.8	52.3
08:00 - 09:00	44.7	48.5	52.8	46.8	53.8	51.2	51.9
09:00 - 10:00	44.7	47.2	53.3	46.4	52.7	51.6	54.3
10:00 - 11:00	44.6	50.6	53.7	45.0	50.8	51.6	53.3
11:00 - 12:00	44.7	50.4	52.9	45.3	50.1	51.2	52.9
12:00 - 13:00	44.7	50.3	52.9	48.4	48.8	50.6	53.5
13:00 - 14:00	49.1	50.4	52.4	50.6	48.6	48.9	52.8
L90(avg)*	50.0	51.3	51.4	49.2	51.7	52.0	51.6

Remark : * Average time between 14:00-14:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-SPRC PLC-Refinery

Location : Southern Refinery Boundary Station 1

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162B

Serial No : G300709

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 93.5/0.2

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	Equivalent Sound Pressure Level (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
13:00 - 14:00	59.7	59.9	60.2	59.4	61.7	61.2	62.1
14:00 - 15:00	59.4	60.4	59.9	59.7	61.7	61.1	62.2
15:00 - 16:00	60.1	60.3	61.8	60.1	61.6	61.6	62.6
16:00 - 17:00	61.5	61.5	62.8	62.3	63.1	63.3	64.1
17:00 - 18:00	61.8	61.7	63.3	61.6	62.7	63.5	64.2
18:00 - 19:00	60.8	61.8	62.5	61.2	63.3	63.5	64.5
19:00 - 20:00	61.8	62.0	62.9	61.6	63.3	63.7	64.0
20:00 - 21:00	60.5	60.6	62.0	60.3	61.5	61.8	62.4
21:00 - 22:00	57.7	58.1	58.2	57.6	58.9	58.5	64.0
22:00 - 23:00	57.4	57.9	58.2	57.6	58.8	58.2	59.3
23:00 - 00:00	57.1	57.6	57.1	57.3	58.3	57.4	59.3
00:00 - 01:00	57.8	57.7	58.9	58.0	58.4	58.0	59.9
01:00 - 02:00	56.2	56.5	56.7	56.3	57.1	59.5	57.3
02:00 - 03:00	56.1	56.5	56.3	56.5	57.0	57.7	57.1
03:00 - 04:00	56.3	56.5	56.6	56.3	56.9	57.5	57.5
04:00 - 05:00	56.3	56.6	56.4	56.8	57.0	57.5	56.9
05:00 - 06:00	57.3	57.7	58.0	58.6	58.6	59.1	58.3
06:00 - 07:00	60.9	61.6	61.3	62.9	62.5	62.8	62.5
07:00 - 08:00	63.0	63.8	62.7	64.4	64.0	64.8	64.3
08:00 - 09:00	62.3	62.9	61.6	63.3	63.0	63.5	63.7
09:00 - 10:00	60.1	61.0	59.7	61.9	61.5	62.4	61.1
10:00 - 11:00	59.8	61.1	59.4	61.5	61.3	62.5	61.8
11:00 - 12:00	60.4	61.9	59.9	62.5	62.0	63.2	63.0
12:00 - 13:00	60.3	60.9	60.0	61.3	61.7	62.1	61.5
Leq(24)*	59.8	60.4	60.4	60.6	61.2	61.6	62.0
Ldn	64.6	65.0	65.1	65.4	65.8	66.2	66.3
Lmax **	89.2	95.6	101.2	100.1	99.7	98.3	99.0
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 13:00-13:00

** Maximum Sound Pressure Level between 13:00-13:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-SPRC PLC-Refinery

Location : Southern Refinery Boundary Station 1

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162B

Serial No : G300709

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 93.5/0.2

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	L90 (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
13:00 - 14:00	57.2	57.6	56.8	56.5	57.9	57.0	58.9
14:00 - 15:00	56.9	58.0	55.7	56.6	57.4	56.6	58.9
15:00 - 16:00	57.1	57.4	56.3	56.1	57.5	57.6	59.3
16:00 - 17:00	58.3	58.5	57.8	56.9	59.2	59.3	61.2
17:00 - 18:00	57.9	57.7	57.1	56.2	58.0	59.6	60.7
18:00 - 19:00	58.0	59.2	58.0	57.0	59.8	59.8	61.6
19:00 - 20:00	58.9	59.3	58.2	57.1	58.6	58.4	60.4
20:00 - 21:00	57.1	57.5	56.3	56.1	56.6	55.7	58.7
21:00 - 22:00	55.9	56.1	55.5	55.3	55.8	55.2	61.4
22:00 - 23:00	55.6	55.9	55.4	55.3	56.0	55.0	56.2
23:00 - 00:00	55.5	56.0	55.0	55.2	56.1	55.3	56.3
00:00 - 01:00	55.6	55.8	55.4	55.1	55.8	55.2	56.4
01:00 - 02:00	55.3	55.4	55.4	54.8	55.6	55.4	55.7
02:00 - 03:00	55.2	55.6	55.2	54.8	55.6	56.1	55.7
03:00 - 04:00	55.3	55.3	55.2	54.6	55.5	55.6	55.6
04:00 - 05:00	55.1	55.5	55.1	55.0	55.4	55.7	55.1
05:00 - 06:00	55.6	55.7	55.6	55.4	55.8	56.0	55.4
06:00 - 07:00	57.9	58.6	57.4	59.0	58.7	58.9	58.6
07:00 - 08:00	60.5	61.7	58.2	61.3	60.6	61.7	61.1
08:00 - 09:00	59.5	60.3	56.4	59.3	58.7	59.2	59.5
09:00 - 10:00	57.5	57.7	55.5	57.4	57.1	59.1	57.2
10:00 - 11:00	56.9	56.3	55.5	56.8	56.9	59.5	57.6
11:00 - 12:00	57.5	57.2	55.8	57.9	57.7	60.1	58.3
12:00 - 13:00	57.6	56.2	55.6	57.2	57.4	59.0	57.5
L90(avg)*	57.2	57.6	56.3	56.9	57.5	58.0	58.7

Remark : * Average time between 13:00-13:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-SPRC PLC-Refinery

Location : Southern Refinery Boundary Station 2

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162B

Serial No : G302237

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 93.5/0.2

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	Equivalent Sound Pressure Level (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
15:00 - 16:00	57.8	55.1	55.4	55.2	56.0	55.2	55.2
16:00 - 17:00	56.7	57.6	58.6	55.3	56.7	57.4	56.8
17:00 - 18:00	55.0	55.2	54.4	53.9	54.1	55.0	54.7
18:00 - 19:00	54.9	54.9	55.0	54.0	54.4	55.1	55.5
19:00 - 20:00	54.3	54.1	55.2	54.4	54.2	53.9	54.3
20:00 - 21:00	54.0	53.6	54.4	55.0	53.6	53.1	54.2
21:00 - 22:00	54.4	54.0	54.2	53.9	52.7	54.5	53.5
22:00 - 23:00	54.2	53.8	54.0	54.5	51.6	54.2	53.4
23:00 - 00:00	54.5	54.7	54.2	54.3	52.3	54.7	53.8
00:00 - 01:00	54.8	53.0	54.5	54.2	52.4	54.0	54.2
01:00 - 02:00	54.9	52.7	52.6	54.2	52.9	58.0	53.9
02:00 - 03:00	54.8	53.7	53.3	54.2	53.8	54.8	56.6
03:00 - 04:00	54.8	53.6	53.3	53.5	53.6	54.3	52.6
04:00 - 05:00	54.9	54.7	53.7	54.7	54.5	54.8	54.1
05:00 - 06:00	56.2	56.6	56.3	64.9	56.1	56.9	57.9
06:00 - 07:00	57.3	56.3	54.9	58.1	56.6	57.7	60.3
07:00 - 08:00	56.7	56.7	55.2	56.8	58.3	56.3	59.8
08:00 - 09:00	56.5	55.3	54.2	56.8	57.6	56.2	58.4
09:00 - 10:00	55.7	56.1	54.2	56.5	59.8	55.9	57.1
10:00 - 11:00	55.7	55.8	55.2	56.2	58.5	55.9	58.5
11:00 - 12:00	55.6	56.3	55.6	56.2	58.9	55.9	57.8
12:00 - 13:00	54.8	55.8	55.7	55.4	59.3	54.9	57.2
13:00 - 14:00	55.2	56.6	53.6	56.7	58.2	54.8	57.7
14:00 - 15:00	54.9	56.5	54.1	55.6	54.2	55.1	59.5
Leq(24)*	55.5	55.3	54.8	56.6	56.1	55.5	56.7
Ldn	61.7	61.1	60.8	64.1	61.0	62.1	62.6
Lmax **	88.6	92.0	105.3	100.5	100.7	88.7	106.8
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 15:00-15:00

** Maximum Sound Pressure Level between 15:00-15:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-SPRC PLC-Refinery

Location : Southern Refinery Boundary Station 2

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162B

Serial No : G302237

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 93.5/0.2

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	L90 (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
15:00 - 16:00	54.2	53.4	53.8	53.1	53.6	53.5	53.3
16:00 - 17:00	53.4	53.5	53.4	53.6	53.7	54.1	53.2
17:00 - 18:00	53.1	53.0	52.3	52.1	51.6	53.4	53.2
18:00 - 19:00	53.0	52.6	53.2	52.7	51.3	53.1	53.2
19:00 - 20:00	52.6	52.1	53.3	52.9	52.3	52.5	52.9
20:00 - 21:00	52.3	52.3	52.9	53.2	51.8	51.7	53.0
21:00 - 22:00	53.0	52.5	52.9	52.6	50.9	52.1	52.2
22:00 - 23:00	53.1	51.8	52.7	53.3	50.0	52.9	52.2
23:00 - 00:00	53.4	53.3	52.7	53.0	50.9	53.3	52.5
00:00 - 01:00	53.3	51.5	53.1	52.7	51.1	52.6	53.0
01:00 - 02:00	53.7	50.8	50.5	52.9	51.4	53.4	52.4
02:00 - 03:00	53.4	52.3	51.7	52.9	51.6	52.9	52.0
03:00 - 04:00	53.6	52.1	51.6	52.3	51.3	52.9	51.0
04:00 - 05:00	53.4	53.4	52.1	53.3	53.0	53.2	51.2
05:00 - 06:00	53.8	53.0	52.8	54.4	53.8	53.8	53.4
06:00 - 07:00	54.5	53.1	52.6	54.6	53.6	54.2	54.1
07:00 - 08:00	54.3	53.6	52.2	54.4	55.9	54.1	57.2
08:00 - 09:00	54.8	53.6	52.6	54.2	55.3	53.9	56.2
09:00 - 10:00	54.2	54.4	52.8	54.7	56.6	54.0	55.0
10:00 - 11:00	54.3	54.1	53.0	54.1	55.9	54.2	56.2
11:00 - 12:00	53.8	54.3	53.2	54.0	56.0	54.0	55.7
12:00 - 13:00	53.2	54.3	51.8	53.6	57.1	53.1	55.1
13:00 - 14:00	53.3	54.5	50.6	54.4	54.0	52.1	55.6
14:00 - 15:00	53.2	54.5	51.4	53.9	52.0	53.3	55.5
L90(avg)*	53.6	53.2	52.5	53.5	53.6	53.3	54.0

Remark : * Average time between 15:00-15:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-SPRC PLC-Refinery

Location : Map Ta Phut New Town

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162C

Serial No : G300832

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 93.7/0.0

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	Equivalent Sound Pressure Level (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
16:00 - 17:00	50.2	49.5	49.4	56.5	49.6	49.3	51.3
17:00 - 18:00	53.5	54.9	48.8	57.0	51.0	53.5	50.0
18:00 - 19:00	54.9	50.2	51.9	57.4	49.7	50.2	50.3
19:00 - 20:00	54.7	51.7	49.2	56.6	48.8	51.2	49.2
20:00 - 21:00	55.0	57.4	53.0	58.3	48.5	50.7	50.8
21:00 - 22:00	52.4	57.9	52.2	55.8	45.4	46.0	45.4
22:00 - 23:00	53.0	52.0	51.7	51.7	46.9	47.0	45.9
23:00 - 00:00	49.9	51.3	52.6	51.8	55.4	49.3	44.9
00:00 - 01:00	48.1	46.0	49.6	46.0	45.2	44.4	45.1
01:00 - 02:00	45.8	52.0	45.2	46.8	45.6	59.0	44.2
02:00 - 03:00	45.3	45.5	46.5	45.7	46.8	50.8	52.9
03:00 - 04:00	44.4	43.2	43.7	43.9	45.5	44.8	43.1
04:00 - 05:00	46.3	45.6	43.3	44.6	47.8	46.8	48.3
05:00 - 06:00	50.7	48.4	47.9	49.8	49.7	48.3	49.0
06:00 - 07:00	50.4	53.5	49.6	45.1	49.8	49.6	59.6
07:00 - 08:00	51.5	49.3	48.5	47.3	51.8	52.3	56.1
08:00 - 09:00	52.3	48.7	47.4	44.7	52.1	51.4	52.2
09:00 - 10:00	49.2	47.1	51.8	45.5	50.1	49.1	49.6
10:00 - 11:00	48.7	48.6	54.8	44.8	48.4	50.1	47.2
11:00 - 12:00	49.2	48.7	55.0	46.7	49.8	49.6	49.0
12:00 - 13:00	48.2	47.4	52.5	45.0	48.3	48.1	47.5
13:00 - 14:00	47.9	46.3	52.0	46.9	51.4	47.7	47.3
14:00 - 15:00	46.9	46.6	56.1	44.7	48.6	50.6	49.8
15:00 - 16:00	47.5	47.2	55.4	47.7	50.2	47.9	57.4
Leq(24)*	50.9	51.3	51.6	52.2	49.7	50.8	51.7
Ldn	56.0	56.7	56.1	55.9	55.9	57.9	58.3
Lmax **	80.1	87.9	84.2	82.7	80.8	78.4	91.7
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 16:00-16:00

** Maximum Sound Pressure Level between 16:00-16:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-SPRC PLC-Refinery

Location : Map Ta Phut New Town

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162C

Serial No : G300832

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 93.7/0.0

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	L90 (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
16:00 - 17:00	45.2	44.6	43.8	54.3	46.2	44.7	45.3
17:00 - 18:00	46.2	46.5	43.9	55.0	46.2	46.1	45.0
18:00 - 19:00	46.7	46.2	45.6	54.5	47.3	46.9	46.2
19:00 - 20:00	48.5	46.4	46.5	54.1	47.1	47.3	46.5
20:00 - 21:00	51.6	49.4	47.2	53.8	46.5	44.3	45.7
21:00 - 22:00	49.1	51.5	47.8	48.1	43.3	44.9	43.1
22:00 - 23:00	47.2	47.3	47.3	45.6	44.5	45.4	43.6
23:00 - 00:00	45.2	46.0	47.7	44.8	44.7	44.1	43.4
00:00 - 01:00	43.2	44.9	45.0	44.8	43.9	42.6	43.4
01:00 - 02:00	44.2	43.4	43.8	44.6	44.3	42.8	42.9
02:00 - 03:00	43.9	43.2	43.2	43.6	44.6	45.9	42.5
03:00 - 04:00	43.2	42.0	42.3	42.5	43.9	43.0	40.3
04:00 - 05:00	43.3	42.8	41.8	43.0	43.5	42.3	41.5
05:00 - 06:00	44.5	44.3	42.6	44.1	44.5	43.3	41.7
06:00 - 07:00	45.6	45.7	44.0	44.2	44.6	43.8	44.0
07:00 - 08:00	45.6	43.5	43.3	44.7	45.5	44.5	48.6
08:00 - 09:00	45.9	42.0	42.7	43.8	44.6	44.8	46.1
09:00 - 10:00	44.4	41.7	43.0	44.0	45.0	43.3	43.6
10:00 - 11:00	44.9	42.8	44.0	43.8	43.7	43.9	43.1
11:00 - 12:00	43.7	42.3	44.4	44.7	44.2	43.7	43.4
12:00 - 13:00	42.6	42.4	45.2	44.1	44.2	42.4	42.6
13:00 - 14:00	43.0	43.5	48.2	44.7	44.8	41.9	43.2
14:00 - 15:00	42.7	42.8	50.5	44.0	43.2	42.8	43.5
15:00 - 16:00	43.1	42.6	52.6	43.7	44.9	43.2	44.2
L90(avg)*	45.8	45.3	46.3	49.0	45.0	44.3	44.3

Remark : * Average time between 16:00-16:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-SPRC PLC-Refinery

Location : Soi Ruam Patana Community

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162B

Serial No : G300990

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 92.9/0.8

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	Equivalent Sound Pressure Level (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
15:00 - 16:00	51.9	50.7	50.2	51.7	52.9	54.4	52.4
16:00 - 17:00	54.1	54.9	54.6	56.6	54.4	52.1	52.5
17:00 - 18:00	54.5	57.1	55.6	54.8	56.8	56.4	55.9
18:00 - 19:00	54.6	54.1	55.2	57.0	54.3	53.6	55.4
19:00 - 20:00	54.6	53.4	55.1	55.6	54.8	55.0	55.1
20:00 - 21:00	54.4	53.7	55.1	53.3	52.1	52.9	53.0
21:00 - 22:00	51.2	51.3	51.6	53.2	50.2	51.0	51.8
22:00 - 23:00	50.9	51.0	55.6	52.3	50.1	47.2	50.0
23:00 - 00:00	53.1	50.3	50.6	47.4	48.8	48.9	48.9
00:00 - 01:00	49.9	48.4	51.0	46.6	45.7	46.6	47.9
01:00 - 02:00	48.5	47.3	48.1	46.3	46.2	58.2	47.0
02:00 - 03:00	46.3	45.6	47.0	47.7	45.2	51.2	49.6
03:00 - 04:00	47.8	46.4	45.9	46.0	46.0	46.1	46.4
04:00 - 05:00	52.0	49.2	51.2	47.7	48.1	47.8	50.1
05:00 - 06:00	54.0	52.7	49.6	51.5	52.3	52.9	55.3
06:00 - 07:00	54.7	55.6	53.9	56.0	55.1	55.4	56.5
07:00 - 08:00	55.0	55.5	55.8	56.2	57.4	56.9	56.4
08:00 - 09:00	53.0	51.1	51.1	52.6	52.3	53.4	53.4
09:00 - 10:00	51.4	50.2	51.2	53.4	50.6	51.0	50.7
10:00 - 11:00	49.6	51.7	52.3	52.9	49.8	52.3	50.7
11:00 - 12:00	51.8	51.0	53.0	52.1	52.7	50.3	50.7
12:00 - 13:00	54.2	51.6	52.8	51.6	52.9	50.9	51.2
13:00 - 14:00	53.8	51.8	52.8	51.9	51.4	50.4	50.8
14:00 - 15:00	54.0	52.3	51.7	51.5	50.6	51.6	55.0
Leq(24)*	52.9	52.4	52.9	53.0	52.5	53.0	52.9
Ldn	58.3	57.6	58.2	57.6	57.1	59.1	58.4
Lmax **	98.5	97.1	97.6	100.4	95.8	106.3	106.5
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 15:00-15:00

** Maximum Sound Pressure Level between 15:00-15:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-SPRC PLC-Refinery

Location : Soi Ruam Patana Community

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162B

Serial No : G300990

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 92.9/0.8

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	L90 (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
15:00 - 16:00	45.0	43.8	45.9	45.4	44.4	44.7	43.8
16:00 - 17:00	45.1	44.9	46.8	48.1	46.7	45.5	45.0
17:00 - 18:00	45.5	46.6	47.2	48.4	46.4	46.9	47.3
18:00 - 19:00	46.9	47.5	48.5	47.9	45.5	47.4	47.7
19:00 - 20:00	48.7	48.5	49.7	47.7	46.3	47.2	48.5
20:00 - 21:00	48.0	48.0	48.9	47.0	45.9	46.2	47.1
21:00 - 22:00	46.8	46.4	48.3	46.7	45.1	45.3	46.8
22:00 - 23:00	48.2	47.4	47.2	46.7	45.7	44.8	46.3
23:00 - 00:00	48.8	46.7	47.1	44.7	44.9	44.6	45.5
00:00 - 01:00	47.6	46.0	45.8	44.7	44.2	44.7	45.2
01:00 - 02:00	45.8	44.7	45.0	44.7	44.1	45.2	45.4
02:00 - 03:00	44.6	44.2	44.2	44.3	43.6	44.2	44.9
03:00 - 04:00	44.3	44.1	43.1	44.6	43.6	44.3	43.8
04:00 - 05:00	44.2	43.6	42.1	44.4	43.2	44.6	42.4
05:00 - 06:00	44.5	43.6	42.9	45.6	43.9	46.0	43.7
06:00 - 07:00	47.3	47.3	46.7	48.5	47.2	48.0	48.4
07:00 - 08:00	47.5	45.6	45.6	49.2	46.3	48.5	48.9
08:00 - 09:00	46.4	44.0	45.2	46.8	45.0	46.8	45.8
09:00 - 10:00	45.3	43.2	44.9	46.4	45.0	45.4	44.4
10:00 - 11:00	45.4	43.1	44.9	44.8	44.2	45.5	43.5
11:00 - 12:00	44.8	44.0	44.4	44.5	45.1	44.2	42.8
12:00 - 13:00	43.9	44.0	44.9	44.5	45.7	43.1	43.3
13:00 - 14:00	43.9	45.5	43.9	45.1	44.5	42.6	44.0
14:00 - 15:00	42.7	46.0	44.1	44.6	43.0	43.1	43.5
L90(avg)*	46.2	45.7	46.2	46.3	45.1	45.6	45.8

Remark : * Average time between 15:00-15:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-SPRC PLC-Refinery

Location : Wat Sophon Community

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162B

Serial No : G300769

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 93.1/0.6

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	Equivalent Sound Pressure Level (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
15:00 - 16:00	52.7	51.4	50.4	53.2	43.8	51.5	50.6
16:00 - 17:00	54.5	51.3	50.0	51.6	53.2	51.6	51.0
17:00 - 18:00	55.4	50.0	50.0	50.8	51.9	51.8	50.2
18:00 - 19:00	51.8	50.3	51.7	50.4	50.9	52.7	54.7
19:00 - 20:00	56.3	57.3	53.7	49.1	47.7	49.9	48.8
20:00 - 21:00	51.9	51.9	54.1	46.6	47.8	49.4	48.4
21:00 - 22:00	49.0	47.1	49.3	44.8	45.7	55.9	47.3
22:00 - 23:00	48.5	48.7	47.5	46.5	44.9	46.9	46.6
23:00 - 00:00	48.3	47.2	47.3	46.6	46.9	46.7	48.2
00:00 - 01:00	48.1	44.6	45.9	44.5	44.4	45.9	48.8
01:00 - 02:00	48.0	42.9	43.8	44.6	44.5	58.9	50.4
02:00 - 03:00	47.3	42.2	44.2	44.3	44.9	54.4	49.6
03:00 - 04:00	48.6	46.1	46.0	46.4	46.5	46.9	45.9
04:00 - 05:00	48.5	44.5	44.0	47.3	46.5	48.0	43.2
05:00 - 06:00	51.5	48.6	50.0	50.4	49.0	50.9	53.6
06:00 - 07:00	51.5	50.7	61.9	50.8	49.3	50.4	56.7
07:00 - 08:00	52.8	51.4	52.2	51.9	50.3	51.3	53.8
08:00 - 09:00	54.9	55.8	52.8	51.0	54.5	52.7	53.0
09:00 - 10:00	53.7	51.1	51.6	50.1	50.1	53.0	52.3
10:00 - 11:00	53.2	49.2	51.0	49.6	48.3	52.6	50.8
11:00 - 12:00	51.6	51.3	51.3	48.8	49.8	52.9	52.3
12:00 - 13:00	52.3	49.6	53.3	47.7	53.9	55.1	52.0
13:00 - 14:00	52.7	51.4	48.3	45.1	49.5	50.2	49.9
14:00 - 15:00	50.5	50.9	50.6	43.6	50.0	49.7	54.8
Leq(24)*	52.1	50.8	52.3	49.0	49.6	52.4	51.6
Ldn	56.5	54.6	59.5	54.3	54.0	58.7	57.6
Lmax **	95.7	94.7	91.4	89.4	100.5	99.1	101.4
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 15:00-15:00

** Maximum Sound Pressure Level between 15:00-15:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-SPRC PLC-Refinery

Location : Wat Sophon Community

Monitor Period : 14-21 May 2026

SLM Model : Cirrus CR162B

Serial No : G300769

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : 14 Oct 2025

SLM Reading / Adjust dB(A) : 93.1/0.6

Expire Date : 13 Oct 2026

Cal Sheet No.: CR-515-2026-138

Time	L90 (dB(A))						
	14-15 May 2026	15-16 May 2026	16-17 May 2026	17-18 May 2026	18-19 May 2026	19-20 May 2026	20-21 May 2026
15:00 - 16:00	49.0	47.0	45.7	48.1	41.9	45.0	45.0
16:00 - 17:00	48.8	46.7	45.9	48.1	42.9	46.6	46.2
17:00 - 18:00	47.6	45.3	46.2	48.5	47.1	46.6	46.1
18:00 - 19:00	47.9	47.0	47.6	48.0	45.6	46.3	45.7
19:00 - 20:00	47.9	46.4	48.4	45.1	43.6	44.1	45.0
20:00 - 21:00	47.2	43.8	46.3	42.4	43.9	42.7	44.3
21:00 - 22:00	46.8	42.9	45.4	41.3	41.0	43.0	43.8
22:00 - 23:00	46.5	43.2	44.5	42.9	41.9	43.0	44.0
23:00 - 00:00	46.7	43.5	43.7	42.8	42.3	43.6	44.5
00:00 - 01:00	46.5	42.0	42.2	41.2	42.2	42.9	46.1
01:00 - 02:00	46.6	41.1	41.3	41.7	42.3	43.3	46.2
02:00 - 03:00	46.3	40.4	41.5	41.6	42.2	45.1	41.8
03:00 - 04:00	46.3	40.5	40.5	41.4	42.4	42.4	40.8
04:00 - 05:00	46.6	42.0	42.1	42.6	42.1	42.3	39.7
05:00 - 06:00	46.7	42.3	41.9	43.9	43.5	43.9	41.9
06:00 - 07:00	49.0	45.5	45.7	46.9	45.7	46.6	46.3
07:00 - 08:00	49.5	45.9	46.4	48.0	47.1	47.9	50.1
08:00 - 09:00	50.0	44.5	46.0	46.5	45.5	47.9	46.8
09:00 - 10:00	49.9	43.7	47.8	46.4	45.4	48.0	46.4
10:00 - 11:00	49.9	43.8	48.0	45.7	44.9	48.2	46.6
11:00 - 12:00	46.9	44.9	48.5	45.2	44.6	48.6	46.2
12:00 - 13:00	46.2	45.1	48.7	42.9	46.4	45.3	45.5
13:00 - 14:00	47.5	47.1	44.3	42.9	44.7	45.9	46.5
14:00 - 15:00	45.8	45.9	44.6	41.7	43.7	45.5	45.2
L90(avg)*	47.8	44.6	45.8	45.2	44.2	45.7	45.5

Remark : * Average time between 15:00-15:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team

ใบรับรองผลการตรวจวัดทรัพยากรทางน้ำ



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รายงานผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์
ตาราง ผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 8 พฤษภาคม 2569)

ชนิดของแพลงก์ตอน	ปริมาณแพลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)			
	S1	S2	S3	S4
แพลงก์ตอนพืช				
Division Cyanophyta				
Class Cyanophyceae				
Order Nostocales				
Family Oscillatoriaceae				
<i>Oscillatoria</i> sp.	-	-	109,000	-
<i>Oscillatoria tenuis</i>	171,000	23,000	55,000	113,000
Family Nostocaceae				
<i>Pseudanabaena</i> sp.	11,000	23,000	55,000	47,000
Division Chlorophyta				
Class Chlorophyceae				
Order Chlorococcales				
Family Hydrodictyaceae				
<i>Pediastrum simplex</i>	-	-	-	9,000
Family Coelastraceae				
<i>Coelastrum microporum</i>	-	-	11,000	-
Family Scenedesmaceae				
<i>Scenedesmus quadricauda</i>	32,000	11,000	22,000	-

ตาราง ผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 8 พฤษภาคม 2569)

(ต่อ)

ชนิดของแพลงก์ตอน	ปริมาณแพลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)			
	S1	S2	S3	S4
Class Euglenophyceae				
Order Euglenales				
Family Euglenaceae				
<i>Euglena acus</i>	-	-	11,000	-
Division Chromophyta				
Class Bacillariophyceae				
Order Biddulphales				
Suborder Coscinodiscineae				
Family Thalassiosiraceae				
<i>Cyclotella striata</i>	161,000	23,000	392,000	19,000
Family Melosiraceae				
<i>Melosira nummuloides</i>	-	-	44,000	-
Family Aulacoseiraceae				
<i>Aulacoseira granulata</i>	118,000	-	-	-
Family Coscinodiscaceae				
<i>Coscinodiscus radiatus</i>	171,000	-	11,000	-
<i>Coscinodiscus</i> sp.	-	11,000	-	-
Family Hemidiscaceae				
<i>Actinocyclus grundleri</i>	118,000	11,000	-	-
Suborder Rhizosoleniineae				
Family Rhizosoleniaceae				
<i>Proboscia alata</i>	21,000	-	-	-
<i>Rhizosolenia pungens</i>	107,000	272,000	22,000	29,000
<i>Rhizosolenia</i> sp.	11,000	-	-	-

ตาราง ผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 8 พฤษภาคม 2569)

(ต่อ)

ชนิดของแพลงก์ตอน	ปริมาณแพลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)			
	S1	S2	S3	S4
Suborder Biddulphiineae				
Family Hemiaulaceae				
<i>Cerataulina pelagica</i>	96,000	-	-	9,000
<i>Hemiaulus sinensis</i>	-	34,000	-	-
<i>Hemidiscus cuneiformis</i>	257,000	-	-	-
Family Chaetoceraceae				
<i>Bacteriastrum furcatum</i>	128,000	-	-	-
<i>Chaetoceros diversus</i>	32,000	-	-	9,000
<i>Chaetoceros furcellatus</i>	628,925,000	174,030,000	501,400,000	171,353,000
<i>Chaetoceros laciniosus</i>	118,000	-	-	19,000
<i>Chaetoceros lorenzianus</i>	-	-	33,000	-
<i>Chaetoceros peruvianus</i>	21,000	-	-	19,000
Family Eupodiscaceae				
<i>Odontella sinensis</i>	11,000	11,000	-	-
Order Bacillariales				
Suborder Fragilariineae				
Family Thalassionemataceae				
<i>Thalassionema frauenfeldii</i>	-	11,000	-	-
<i>Thalassiosira</i> sp.	-	45,000	196,000	-
Family Licmophoriaceae				
<i>Licmophora abbreviata</i>	-	11,000	-	-
Suborder Bacillariineae				
Family Achnanthaceae				
<i>Cocconeis scutellum</i>	-	11,000	-	-
Family Naviculaceae				
<i>Amphipleura rutilans</i>	-	57,000	-	-

ตาราง ผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 8 พฤษภาคม 2569)

(ต่อ)

ชนิดของแพลงก์ตอน	ปริมาณแพลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)			
	S1	S2	S3	S4
<i>Amphora exigua</i>	-	-	22,000	-
<i>Amphora</i> sp.	11,000	-	11,000	-
<i>Diploneis ovalis</i>	-	11,000	-	-
<i>Meuniera membranacea</i>	-	-	-	19,000
<i>Navicula cuspidata</i>	-	-	33,000	-
<i>Navicula lanceolata</i>	-	-	22,000	-
<i>Navicula</i> sp.	-	11,000	-	-
<i>Pleurosigma angulatum</i>	11,000	11,000	11,000	-
<i>Pleurosigma</i> sp.	-	23,000	-	-
<i>Trachyneis</i> sp.	32,000	11,000	-	-
Family Bacillariaceae				
<i>Cylindrotheca closterium</i>	11,000	-	11,000	-
<i>Nitzschia recta</i>	-	-	33,000	-
<i>Nitzschia sigmoidea</i>	-	-	11,000	-
<i>Pseudo-nitzschia</i> sp.	107,000	-	-	-
Family Surirellaceae				
<i>Entomoneis robusta</i>	-	11,000	-	-
Class Dinophyceae				
Order Prorocentrales				
Family Prorocentraceae				
<i>Prorocentrum mexicanum</i>	21,000	-	-	-
<i>Prorocentrum micans</i>	321,000	-	-	-
<i>Prorocentrum sigmoides</i>	64,000	-	-	-
Order Gymnodiniales				
Family Gymnodinium				
<i>Gyrodinium spirale</i>	11,000	-	-	-

ตาราง ผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 8 พฤษภาคม 2569)

(ต่อ)

ชนิดของแพลงก์ตอน	ปริมาณแพลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)			
	S1	S2	S3	S4
Order Gonyaulacalea				
Family Ceratiaceae				
<i>Ceratium furca</i>	32,000	-	-	-
<i>Ceratium fusus</i>	64,000	-	-	-
<i>Ceratium macroceros</i>	96,000	-	-	94,000
<i>Ceratium porrectum</i>	11,000	-	-	-
<i>Ceratium</i> sp.	-	-	-	9,000
<i>Ceratium trichoceros</i>	118,000	-	-	103,000
Family Gonyaulacaceae				
<i>Gonyaulax diegensis</i>	342,000	-	-	-
<i>Gonyaulax</i> sp.	32,000	-	164,000	38,000
Order Peridiniales				
Family Calciodinellaceae				
<i>Scrippsiella trocoidea</i>	32,000	-	131,000	19,000
Family Protoperidiniaceae				
<i>Protoperidinium angustum</i>	43,000	-	-	9,000
<i>Protoperidinium conicum</i>	214,000	-	44,000	19,000
<i>Protoperidinium curtipes</i>	193,000	-	11,000	19,000
<i>Protoperidinium curvipes</i>	21,000	-	-	-
<i>Protoperidinium depressum</i>	21,000	-	11,000	29,000
<i>Protoperidinium latispinum</i>	32,000	-	-	-
<i>Protoperidinium oblongum</i>	32,000	-	-	-
<i>Protoperidinium pellucidum</i>	-	-	-	47,000
<i>Protoperidinium punctulatum</i>	-	-	11,000	47,000
<i>Protoperidinium</i> sp.	471,000	182,000	218,000	301,000
<i>Protoperidinium spinulosum</i>	-	-	-	56,000

ตาราง ผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 8 พฤษภาคม 2569)

(ต่อ)

ชนิดของแพลงก์ตอน	ปริมาณแพลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)			
	S1	S2	S3	S4
แพลงก์ตอนสัตว์				
Phylum Protozoa				
Subphylum Ciliophora				
Class Ciliata				
Subclass Spirotricha				
Order Tintinnida				
Family Tintinnididae				
<i>Leprotintinnus nordquisti</i>	96,000	-	-	19,000
Family Codonellidae				
<i>Tintinnopsis gracile</i>	11,000	-	-	-
<i>Tintinnopsis loricata</i>	-	-	11,000	-
<i>Tintinnopsis radix</i>	21,000	-	-	-
<i>Tintinnopsis</i> sp.	-	-	11,000	9,000
<i>Tintinnopsis subacuta</i>	-	11,000	44,000	-
Family Cyttarocylidae				
<i>Favella ehrenbergii</i>	11,000	34,000	44,000	-
<i>Favella panamensis</i>	21,000	-	-	9,000
Family Petalotrichidae				
<i>Metacylis pithos</i>	43,000	-	-	-
Family Tintinnidae				
<i>Eutintinnus fraknoi</i>	11,000	-	-	-
Phylum Annelida				
Class Polychaeta				
Polychaete larvae	-	-	-	9,000

ตาราง ผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 8 พฤษภาคม 2569)

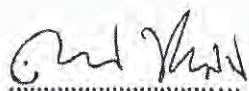
(ต่อ)

ชนิดของแพลงก์ตอน	ปริมาณแพลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)			
	S1	S2	S3	S4
Phylum Arthropoda				
Class Crustacea				
Subclass Copepoda				
Copepod nauplius	813,000	125,000	65,000	150,000
Order Calanoida				
Calanoid copepod	-	-	11,000	-
Order Harpacticoida				
Harpacticoid copepod	43,000	11,000	-	-
Phylum Mollusca				
Class Gastropoda				
Gastropod larvae	75,000	-	-	66,000
Class Bivalvia				
Pelecypod larvae	-	23,000	33,000	9,000
Phylum Echinodermata				
Class Ophiuroidae				
Ophiopluteus larvae	11,000	-	-	-
Phylum Chordata				
Subphylum Urochordata				
Class Larvacea				
Order Urochorda				
Family Oikopleuridae				
<i>Oikopleura dioica</i>	11,000	-	-	9,000
<i>Oikopleura</i> sp.	32,000	-	-	-
ชนิดของแพลงก์ตอนพืช	43	22	28	24
ชนิดของแพลงก์ตอนสัตว์	13	5	7	8
ชนิดแพลงก์ตอนรวม	56	27	35	32

ตาราง ผลการวิเคราะห์เพลงก่ตอนพืชและเพลงก่ตอนสัตว์ (เก็บตัวอย่างวันที่ 8 พฤษภาคม 2569)

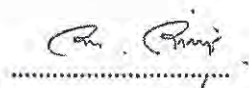
(ต่อ)

ชนิดของเพลงก่ตอน	ปริมาณเพลงก่ตอน (หน่วยต่อลูกบาศก์เมตร)			
	S1	S2	S3	S4
ปริมาณเพลงก่ตอนพืช	632,852,000	174,844,000	503,105,000	172,435,000
ปริมาณเพลงก่ตอนสัตว์	1,199,000	204,000	219,000	280,000
ปริมาณเพลงก่ตอนรวม	634,051,000	175,048,000	503,324,000	172,715,000
ค่าดัชนีความหลากหลายเพลงก่ตอนพืช	0.0578	0.0403	0.0316	0.0544
ค่าดัชนีความหลากหลายเพลงก่ตอนสัตว์	1.3313	1.1598	1.7413	1.4100
ค่าดัชนีความสม่ำเสมอเพลงก่ตอนพืช	0.0154	0.0130	0.0095	0.0171
ค่าดัชนีความสม่ำเสมอเพลงก่ตอนสัตว์	0.5190	0.7206	0.8949	0.6781



(นางสาวกนกวรรณ ขาวค้อน)

ผู้วิเคราะห์



(นายอลงกต อินทรชาติ)

หัวหน้าสถานีวิจัยประมงศรีราชา



สถานีวิจัยประมงศรีราชา
101/12 หมู่ 9 ต. บางพระ
อ. ศรีราชา จ. ชลบุรี 20110
โทร./โทรสาร. (038) 311379

รายงานผลการวิเคราะห์สัตว์หน้าดิน

ตาราง ผลการวิเคราะห์สัตว์หน้าดิน (เก็บตัวอย่างวันที่ 8 พฤษภาคม 2569)

สกุลสัตว์หน้าดิน	ปริมาณสัตว์หน้าดิน (ตัวต่อตารางเมตร)			
	S1	S2	S3	S4
Phylum Annelida				
Class Polychaeta				
Order Capitellida				
Family Capitellidae				
<i>Heteromastus</i> sp. (ไส้เดือนทะเล)	-	60	-	-
Order Eunicida				
Family Eunicidae				
<i>Lysidice</i> sp. (ไส้เดือนทะเล)	30	-	-	-
<i>Marphysa</i> sp. (ไส้เดือนทะเล)	-	-	30	-
Family Onuphidae				
<i>Diopatra</i> sp. (ไส้เดือนทะเล)	-	15	-	-
Order Phyllodocida				
Family Nephtyidae				
<i>Nephtys</i> sp. (ไส้เดือนทะเล)	15	-	-	15
Family Nereididae				
<i>Nereis</i> sp. (แม่เพรียง)	-	30	-	-
Order Terebellida				
Family Cirratulidae				
<i>Cirratulus</i> sp. (ไส้เดือนทะเล)	-	149	-	-

ตาราง ผลการวิเคราะห์สัตว์หน้าดิน (เก็บตัวอย่างวันที่ 8 พฤษภาคม 2569) (ต่อ)

สกุลสัตว์หน้าดิน	ปริมาณสัตว์หน้าดิน (ตัวต่อตารางเมตร)			
	S1	S2	S3	S4
Phylum Arthropoda				
Class Malacostraca				
Order Decapoda				
Family Diogenidae				
<i>Diogenes</i> sp. (ปูเสฉวน)	149	-	-	-
Order Isopoda				
Family Cirolanidae				
<i>Cirolana</i> sp. (ไอโซพอด)	-	-	-	30
Phylum Mollusca				
Class Bivalvia				
Order Carditida				
Family Crassatellidae				
<i>Bathytormus</i> sp. (หอยสองฝาชนิดหนึ่ง)	-	15	-	-
Order Venerida				
Family Veneridae				
<i>Paphia</i> sp. (หอยลาย)	-	15	-	-
Phylum Echinodermata				
Class Echinoidea				
Order Camarodonta				
Family Temnopleuridae				
<i>Temnopleurus</i> sp. (เม่นทะเล)	-	-	-	238
Phylum Chordata				
Class Leptocardii				
Order Amphioxiformes				
Family Branchiostomidae				
<i>Branchiostoma</i> sp. (แอมฟิออกซ์ส)	430	-	30	119

ตาราง ผลการวิเคราะห์สัตว์หน้าดิน (เก็บตัวอย่างวันที่ 8 พฤษภาคม 2569) (ต่อ)

สกุลสัตว์หน้าดิน	ปริมาณสัตว์หน้าดิน (ตัวต่อตารางเมตร)			
	S1	S2	S3	S4
สกุลสัตว์หน้าดิน	4	6	2	4
ปริมาณสัตว์หน้าดิน	624	284	60	402
ค่าดัชนีความหลากหลายสัตว์หน้าดิน	0.8341	1.3703	0.6931	0.9871

- หมายเหตุ :
1. สถานี S1 : เกาะสะเก็ด
 2. สถานี S2 : หาดทรายทอง
 3. สถานี S3 : จุดระบายน้ำทิ้งของโรงกลั่นน้ำมันลงทะเล
 4. สถานี S4 : ทะเลเปิด

.....
 (นายอรรถวุฒิ กันทะวงศ์)
 ผู้วิเคราะห์

.....
 (นายอลงกต อินทรชาติ)
 หัวหน้าสถานีวิจัยประมงศรีราชา

ใบรับรองผลการตรวจวัดคุณภาพน้ำใต้ดิน



บริษัท ซีคอต จำกัด
SECOT CO., LTD.

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

GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No	: 0447/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 12/03/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/03/2026	SAMPLING TIME	: 10:29-10:36,14:00-14:14
ANALYTICAL DATE	: 13,17/03/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 27/03/2026		: ๖-239-๖-0007
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-101B	MW-102A	
Chromium (Cr)	mg/l	3120 B	< 0.001	< 0.01	ND	≤ 6.0
Manganese (Mn)	mg/l	3120 B	< 0.001	< 0.01	0.03	≤ 33
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	ND	≤ 5.0

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. ๖-239-๖-0022

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๖-0005

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3. ^{1/} 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.



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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0447/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 12/03/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/03/2026	SAMPLING TIME	: 10:29-10:36,14:00-14:14
ANALYTICAL DATE	: 16-17/03/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 27/03/2026		: ๓-239-๓-0007
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-101B	MW-102A	
Benzene	mg/l	6200 B	< 0.0002	ND	ND	< 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	ND	< 2.0
Toluene	mg/l	6200 B	< 0.0002	ND	ND	< 5.0
m-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
o-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
p-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
Total Xylenes	mg/l	6200 B	< 0.0006	ND	ND	≤ 24

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

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(Miss Jutarat Jaemruen)

Analyst

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ANALYTICAL DATE	: 16-20/03/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 27/03/2026		: ๖-239-๖-0007
SAMPLE CONDITION	: เหลือสิ่งไม่มีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS	ND	STATION		STANDARD ^{1/}
		METHODS	(non-detectable)	MW-101B	MW-102A	
<u>Total Petroleum Hydrocarbor</u>						
- TPH (C ₅ - C ₈)	mg/l	5030 C/8260 D	< 0.003	ND	ND	≤ 1.4
- Pentane						
- Benzene						
- Toluene						
- m,p-Xylene						
- o-Xylene						
- Ethylbenzene						
- TPH (C _{>8} - C ₁₆)	mg/l	3510 C/8015 D	< 0.025	ND	ND	≤ 1.7
- n-Nonane						
- n-Decane						
- n-Dodecane						
- n-Tetradecane						
- n-Hexadecane						
- TPH (C _{>16} - C ₃₅)	mg/l	3510 C/8015 D	< 0.050	ND	ND	≤ 0.1
- n-Octadecane						
- n-Eicosane						
- n-Docosane						
- n-Tetracosane						
- n-Hexacosane						
- n-Octacosane						
- n-Triacontane						
- n-Dotriacontane						
- n-Tetratriacontane						
- Pentatriacontane						

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

Sudaporn S.
(Miss Sudaporn Soonthorn)

Analyst

REG. NO. ๖-239-๖-0001

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Technical Management Team

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No	: 1047/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 18/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 14:28-15:17
ANALYTICAL DATE	: 19-20/06/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/06/2026		: ๖-239-๖-0025
SAMPLE CONDITION	: ใส	FILE CODE	: 226003_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				MW-103A	
Chromium (Cr)	mg/l	3120 B	< 0.001	ND	≤ 6.0
Manganese (Mn)	mg/l	3120 B	< 0.001	0.01	≤ 33
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 24th ED., 2023 (AWWA, APHA, WEF)

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(Miss Jutarat Jaemruen)

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REG. NO. ๖-239-๖-0005

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GROUND WATER ANALYSIS REPORT

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SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 18/06/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 19/06/2026	SAMPLING TIME	: 14:28-15:17
ANALYTICAL DATE	: 22/06/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/06/2026		: ๖-239-๖-0025
SAMPLE CONDITION	: ใส	FILE CODE	: 226003_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				MW-103A	
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 24th ED., 2023 (AWWA, APHA, WEF)

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GROUND WATER ANALYSIS REPORT

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ANALYTICAL DATE	: 22-23/06/2026	SITE OPERATOR	: Mr. Jeerawat Khothamhan
REPORT DATE	: 26/06/2026		: ๖-239-๓-0025
SAMPLE CONDITION	: ใส	FILE CODE	: 226003_GW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-103A	STANDARD ^{1/}
<u>Total Petroleum Hydrocarbon</u>					
- TPH (C ₅ - C ₈)	mg/l	5030 C/8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C ₈ - C ₁₆)	mg/l	3510 C/8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C ₁₆ - C ₃₅)	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 : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24th ED., 2023 (AWWA, APHA, WEF)

Sudaporn S.
(Miss Sudaporn Soonthorn)

Analyst

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No	: 0447/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 11/03/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/03/2026	SAMPLING TIME	: 11:14-11:20
ANALYTICAL DATE	: 13,17/03/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 27/03/2026		: ๖-239-๓-0007
SAMPLE CONDITION	: เหลือถังใส่มีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				MW-104A	
Chromium (Cr)	mg/l	3120 B	< 0.001	ND	≤ 6.0
Manganese (Mn)	mg/l	3120 B	< 0.001	0.14	≤ 33
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 24th ED. 2023 (AWWA, APHA, WEF)

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. ๖-239-๓-0022

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๓-0005

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GROUND WATER ANALYSIS REPORT

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SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 11/03/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/03/2026	SAMPLING TIME	: 11:14-11:20
ANALYTICAL DATE	: 16-17/03/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 27/03/2026		: ๓-239-๓-0007
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				MW-104A	
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 24th ED., 2023 (AWWA, APHA, WEF)

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SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION MW-104A	STANDARD ^{1/}
<u>Total Petroleum Hydrocarbon</u>					
- TPH (C ₅ - C ₈)	mg/l	5030 C/8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C ₉ - C ₁₆)	mg/l	3510 C/8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C ₁₆ - C ₃₅)	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 : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 24th ED., 2023 (AWWA, APHA, WEF)

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. ๖-239-๓-0001

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SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 11/03/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/03/2026	SAMPLING TIME	: 10:29-10:36,10:50-11:00
ANALYTICAL DATE	: 13,17/03/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 27/03/2026		: ๖-239-๖-0007
SAMPLE CONDITION	: เหลือไอสมิตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-105B	MW-106B	
Chromium (Cr)	mg/l	3120 B	< 0.001	< 0.01	< 0.01	≤ 6.0
Manganese (Mn)	mg/l	3120 B	< 0.001	1.88	0.40	≤ 33
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	< 0.01	< 0.01	≤ 5.0

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

Jutarat Jaemruen

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SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-105B	MW-106B	
Benzene	mg/l	6200 B	< 0.0002	ND	ND	< 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	ND	< 2.0
Toluene	mg/l	6200 B	< 0.0002	ND	ND	< 5.0
m-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
o-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
p-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
Total Xylenes	mg/l	6200 B	< 0.0006	ND	ND	≤ 24

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

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SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS	ND	STATION		STANDARD ^{1/}
		METHODS	(non-detectable)	MW-105B	MW-106B	
Total Petroleum Hydrocarbon						
- TPH (C ₅ - C ₈)	mg/l	5030 C/8260 D	< 0.003	ND	ND	≤ 1.4
- Pentane						
- Benzene						
- Toluene						
- m,p-Xylene						
- o-Xylene						
- Ethylbenzene						
- TPH (C _{>8} - C ₁₆)	mg/l	3510 C/8015 D	< 0.025	ND	ND	≤ 1.7
- n-Nonane						
- n-Decane						
- n-Dodecane						
- n-Tetradecane						
- n-Hexadecane						
- TPH (C _{>16} - C ₃₅)	mg/l	3510 C/8015 D	< 0.050	ND	ND	≤ 0.1
- n-Octadecane						
- n-Eicosane						
- n-Docosane						
- n-Tetracosane						
- n-Hexacosane						
- n-Octacosane						
- n-Triacontane						
- n-Dotriacontane						
- n-Tetratriacontane						
- Pentatriacontane						

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. ๗-239-๓-0001

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SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 11/03/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/03/2026	SAMPLING TIME	: 13:59-14:10, 10:01-10:13
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REPORT DATE	: 27/03/2026		: ๖-239-๖-0007
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-107C	MW-108B	
Chromium (Cr)	mg/l	3120 B	< 0.001	< 0.01	< 0.01	≤ 6.0
Manganese (Mn)	mg/l	3120 B	< 0.001	0.46	0.23	≤ 33
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	< 0.01	ND	≤ 5.0

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

Jutarat Jaemruen

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SAMPLE CONDITION	: เหลือถังใส่มีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-107C	MW-108B	
Benzene	mg/l	6200 B	< 0.0002	ND	ND	< 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	ND	< 2.0
Toluene	mg/l	6200 B	< 0.0002	ND	ND	< 5.0
m-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
o-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
p-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
Total Xylenes	mg/l	6200 B	< 0.0006	ND	ND	≤ 24

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ANALYTICAL DATE	: 16-20/03/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 27/03/2026		: ๗-239-๓-0007
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS	ND	STATION		STANDARD ^{1/}
		METHODS	(non-detectable)	MW-107C	MW-108B	
Total Petroleum Hydrocarbon						
- TPH (C ₅ - C ₈)	mg/l	5030 C/8260 D	< 0.003	ND	ND	≤ 1.4
- Pentane						
- Benzene						
- Toluene						
- m,p-Xylene						
- o-Xylene						
- Ethylbenzene						
- TPH (C _{>8} - C ₁₆)	mg/l	3510 C/8015 D	< 0.025	ND	ND	≤ 1.7
- n-Nonane						
- n-Decane						
- n-Dodecane						
- n-Tetradecane						
- n-Hexadecane						
- TPH (C _{>16} - C ₃₅)	mg/l	3510 C/8015 D	< 0.050	ND	ND	≤ 0.1
- n-Octadecane						
- n-Eicosane						
- n-Docosane						
- n-Tetracosane						
- n-Hexacosane						
- n-Octacosane						
- n-Triacontane						
- n-Dotriacontane						
- n-Tetratriacontane						
- Pentatriacontane						

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. ๗-239-๓-0001

Khemchuda Inorn

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Technical Management Team

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No	: 0447/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 11-12/03/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/03/2026	SAMPLING TIME	: 14:36-14:46, 11:25-11:38
ANALYTICAL DATE	: 13,17/03/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 27/03/2026		: ๖-239-๓-0007
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-109A	MW-111A	
Chromium (Cr)	mg/l	3120 B	< 0.001	< 0.01	< 0.01	≤ 6.0
Manganese (Mn)	mg/l	3120 B	< 0.001	0.11	0.26	≤ 33
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	< 0.01	< 0.01	≤ 5.0

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. ๖-239-๓-0022

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๓-0005

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0447/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๓-239
SAMPLING DATE	: 11-12/03/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/03/2026	SAMPLING TIME	: 14:36-14:46, 11:25-11:38
ANALYTICAL DATE	: 16-17/03/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 27/03/2026		: ๓-239-๓-0007
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-109A	MW-111A	
Benzene	mg/l	6200 B	< 0.0002	ND	ND	< 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	ND	< 2.0
Toluene	mg/l	6200 B	< 0.0002	ND	ND	< 5.0
m-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
o-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
p-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
Total Xylenes	mg/l	6200 B	< 0.0006	ND	ND	≤ 24

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

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REG. NO. ๓-239-๓-0022

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No	: 0447/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๗-239
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RECEIVED DATE	: 13/03/2026	SAMPLING TIME	: 14:36-14:46, 11:25-11:38
ANALYTICAL DATE	: 16-20/03/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 27/03/2026		: ๗-239-๓-0007
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS	ND	STATION		STANDARD ^{1/}
		METHODS	(non-detectable)	MW-109A	MW-111A	
Total Petroleum Hydrocarbon						
- TPH (C ₅ - C ₈)	mg/l	5030 C/8260 D	< 0.003	ND	ND	≤ 1.4
- Pentane						
- Benzene						
- Toluene						
- m,p-Xylene						
- o-Xylene						
- Ethylbenzene						
- TPH (C _{>8} - C ₁₆)	mg/l	3510 C/8015 D	< 0.025	ND	ND	≤ 1.7
- n-Nonane						
- n-Decane						
- n-Dodecane						
- n-Tetradecane						
- n-Hexadecane						
- TPH (C _{>16} - C ₃₅)	mg/l	3510 C/8015 D	< 0.050	ND	ND	≤ 0.1
- n-Octadecane						
- n-Eicosane						
- n-Docosane						
- n-Tetracosane						
- n-Hexacosane						
- n-Octacosane						
- n-Triacontane						
- n-Dotriacontane						
- n-Tetratriacontane						
- Pentatriacontane						

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

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. ๗-239-๓-0001

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๗-239-๓-0005

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No	: 0447/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 12/03/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/03/2026	SAMPLING TIME	: 10:55-11:06, 15:13-15:22
ANALYTICAL DATE	: 13,17/03/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 27/03/2026		: ๖-239-๖-0007
SAMPLE CONDITION	: เหลือใสมีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-112A	MW-113A	
Chromium (Cr)	mg/l	3120 B	< 0.001	ND	< 0.01	≤ 6.0
Manganese (Mn)	mg/l	3120 B	< 0.001	0.03	0.02	≤ 33
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	< 0.01	≤ 5.0

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

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GROUND WATER ANALYSIS REPORT

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REPORT DATE	: 27/03/2026		: ๖-239-๓-0007
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-112A	MW-113A	
Benzene	mg/l	6200 B	< 0.0002	ND	ND	< 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	ND	< 2.0
Toluene	mg/l	6200 B	< 0.0002	ND	ND	< 5.0
m-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
o-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
p-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
Total Xylenes	mg/l	6200 B	< 0.0006	ND	ND	≤ 24

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

Jutarat Jaemruen

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Analyst

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GROUND WATER ANALYSIS REPORT

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SAMPLING DATE	: 12/03/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/03/2026	SAMPLING TIME	: 10:55-11:06, 15:13-15:22
ANALYTICAL DATE	: 16-20/03/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 27/03/2026	FILE CODE	: ๖-239-๓-0007
SAMPLE CONDITION	: เหลืองใสมีตะกอน		

PARAMETER	UNIT	ANALYSIS	ND	STATION		STANDARD ^{1/}
		METHODS	(non-detectable)	MW-112A	MW-113A	
Total Petroleum Hydrocarbon						
- TPH (C ₅ - C ₈)	mg/l	5030 C/8260 D	< 0.003	ND	ND	≤ 1.4
- Pentane						
- Benzene						
- Toluene						
- m,p-Xylene						
- o-Xylene						
- Ethylbenzene						
- TPH (C _{>8} - C ₁₆)	mg/l	3510 C/8015 D	< 0.025	0.033	ND	≤ 1.7
- n-Nonane						
- n-Decane						
- n-Dodecane						
- n-Tetradecane						
- n-Hexadecane						
- TPH (C _{>16} - C ₃₅)	mg/l	3510 C/8015 D	< 0.050	ND	ND	≤ 0.1
- n-Octadecane						
- n-Eicosane						
- n-Docosane						
- n-Tetracosane						
- n-Hexacosane						
- n-Octacosane						
- n-Triacontane						
- n-Dotriacontane						
- n-Tetratriacontane						
- Pentatriacontane						

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

Sudaporn S.
(Miss Sudaporn Soonthorn)

Analyst

REG. NO. ๖-239-๓-0001

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๓-0005

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No	: 0447/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 11-12/03/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/03/2026	SAMPLING TIME	: 15:03-15:15, 14:33-14:45
ANALYTICAL DATE	: 13,17/03/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 27/03/2026		: ๖-239-๖-0007
SAMPLE CONDITION	: เหลือองใส่มีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-114A	MW-115A	
Chromium (Cr)	mg/l	3120 B	< 0.001	< 0.01	ND	≤ 6.0
Manganese (Mn)	mg/l	3120 B	< 0.001	0.07	0.18	≤ 33
Mercury (Hg)	mg/l	3112 B	< 0.0001	ND	ND	≤ 0.7
Nickel (Ni)	mg/l	3120 B	< 0.002	ND	< 0.01	≤ 5.0

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

Jutarat Jaemruen
(Miss Jutarat Jaemruen)
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REG. NO. ๖-239-๖-0022

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0447/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 11-12/03/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/03/2026	SAMPLING TIME	: 15:03-15:15, 14:33-14:45
ANALYTICAL DATE	: 16-17/03/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 27/03/2026		: ๖-239-๓-0007
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-114A	MW-115A	
Benzene	mg/l	6200 B	< 0.0002	ND	ND	< 0.2
Ethylbenzene	mg/l	6200 B	< 0.0002	ND	ND	< 2.0
Toluene	mg/l	6200 B	< 0.0002	ND	ND	< 5.0
m-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
o-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
p-Xylene	mg/l	6200 B	< 0.0002	ND	ND	≤ 24
Total Xylenes	mg/l	6200 B	< 0.0006	ND	ND	≤ 24

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

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. ๖-239-๓-0022

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No	: 0447/69
SAMPLING BY	: SECOT Co., Ltd.	REGISTRATION No.	: ๖-239
SAMPLING DATE	: 11-12/03/2026	SAMPLING METHOD	: Pneumatic Bladder Pump
RECEIVED DATE	: 13/03/2026	SAMPLING TIME	: 15:03-15:15, 14:33-14:45
ANALYTICAL DATE	: 16-20/03/2026	SITE OPERATOR	: Mr. Aniwat Pimwanna
REPORT DATE	: 27/03/2026		: ๖-239-๖-0007
SAMPLE CONDITION	: เหลืองใสมีตะกอน	FILE CODE	: 226003_GW_March

PARAMETER	UNIT	ANALYSIS	ND	STATION		STANDARD ^{1/}
		METHODS	(non-detectable)	MW-114A	MW-115A	
<u>Total Petroleum Hydrocarbon</u>						
- TPH (C ₅ - C ₈)	mg/l	5030 C/8260 D	< 0.003	ND	ND	≤ 1.4
- Pentane						
- Benzene						
- Toluene						
- m,p-Xylene						
- o-Xylene						
- Ethylbenzene						
- TPH (C _{>8} - C ₁₆)	mg/l	3510 C/8015 D	< 0.025	ND	ND	≤ 1.7
- n-Nonane						
- n-Decane						
- n-Dodecane						
- n-Tetradecane						
- n-Hexadecane						
- TPH (C _{>16} - C ₃₅)	mg/l	3510 C/8015 D	< 0.050	ND	ND	≤ 0.1
- n-Octadecane						
- n-Eicosane						
- n-Docosane						
- n-Tetracosane						
- n-Hexacosane						
- n-Octacosane						
- n-Triacontane						
- n-Dotriacontane						
- n-Tetratriacontane						
- Pentatriacontane						

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

Sudaporn S.
(Miss Sudaporn Soonthorn)

Analyst

REG. NO. ๖-239-๖-0001

Khemchuda Insorn

(Miss Khemchuda Insorn)

Technical Management Team

REG. NO. ๖-239-๖-0005

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ใบรับรองผลการตรวจวัดคุณภาพดิน



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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0585/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 25-26/03/2024	SAMPLING TIME	: 09:41-09:53, 10:15-10:27
RECEIVED DATE	: 27/03/2024	ANALYTICAL DATE	: 27-28/03/2024, 04-06/04/2024
REPORT DATE	: 17/04/2024	SITE OPERATOR	: Mr. Baworn Deechaiya
SAMPLE CONDITION	: Normal	FILE CODE	: 224003_Soil_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-101 B	MW-102 A	
Naphthalene	mg/kg	3540 C / 8270 E	< 0.005	ND	ND	≤ 1,000
Hexane	mg/kg	5035 A / 8260 D	< 0.001	ND	ND	≤ 1,000
Benzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 15
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 : USE EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1st ED., 1990

Jutarat Jaemruen
(Miss Jutarat Jaemruen)

Analyst

REG. NO. 1-239-1-0022

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 1-239-1-0004

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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0585/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 25-26/03/2024	SAMPLING TIME	: 09:41-09:53, 10:15-10:27
RECEIVED DATE	: 27/03/2024	ANALYTICAL DATE	: 27/03/2024-04/04/2024
REPORT DATE	: 17/04/2024	SITE OPERATOR	: Mr. Baworn Decchalya
SAMPLE CONDITION	: Normal	FILE CODE	: 224003_Soil_March

PARAMETER	UNIT	ANALYSIS	ND	STATION		STANDARD ^{1/}
		METHODS	(non-detectable)	MW-101 B	MW-102 A	
Total Petroleum Hydrocarbons						
- TPH (C ₅ - C ₉)	mg/kg	5035A /8260 D	< 0.003	ND	ND	≤ 25
- Pentane						
- Benzene						
- Toluene						
- m,p-Xylene						
- o-Xylene						
- Ethylbenzene						
- TPH (C ₁₀ - C ₁₆)	mg/kg	3540C/8015 D	< 0.25	1.23	ND	≤ 25
- n-Nonane						
- n-Decane						
- n-Dodecane						
- n-Tetradecane						
- n-Hexadecane						
- TPH (C ₁₇ - C ₃₅)	mg/kg	3540C/8015 D	< 1.85	4.92	7.80	≤ 8
- n-Octadecane						
- n-Eicosane						
- n-Docosane						
- n-Tetracosane						
- n-Hexacosane						
- n-Octacosane						
- n-Triacontane						
- n-Dotriacontane						
- n-Tetracontane						
- Pentacontane						

REFERENCE: USE EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1st ED., 2020.

Sudaporn S.
(Miss Sudaporn Soonthorn)
Analyst
REG. NO. 7-239-ก-0001

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(Mrs. Araya Tipparuk)
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REG. NO. 7-239-ก-0004

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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0585/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 26/03/2024	SAMPLING TIME	: 10:34-10:47, 10:55-11:09
RECEIVED DATE	: 27/03/2024	ANALYTICAL DATE	: 27-28/03/2024, 04-06/04/2024
REPORT DATE	: 17/04/2024	SITE OPERATOR	: Mr. Baworn Deechaiya
SAMPLE CONDITION	: Normal	FILE CODE	: 224003 Soil March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-103 A	MW-104 A	
Naphthalene	mg/kg	3540 C / 8270 E	< 0.005	ND	ND	≤ 1,000
Hexane	mg/kg	5035 A / 8260 D	< 0.001	ND	ND	≤ 1,000
Benzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 15
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: USEPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1st ED., 2010

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 3-239-0-0022

Araya Tippauk

(Mrs. Araya Tippauk)

Technical Management Team

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SOIL SAMPLES ANALYSIS REPORT

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SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 26/03/2024	SAMPLING TIME	: 10:34-10:47, 10:55-11:09
RECEIVED DATE	: 27/03/2024	ANALYTICAL DATE	: 27/03/2024-04/04/2024
REPORT DATE	: 17/04/2024	SITE OPERATOR	: Mr. Baworn Deechaiya
SAMPLE CONDITION	: Normal	FILE CODE	: 224003 Soil March

PARAMETER	UNIT	ANALYSIS	ND	STATION		STANDARD ^{1/}
		METHODS	(non-detectable)	MW-103 A	MW-104 A	
Total Petroleum Hydrocarbons						
- TPH (C ₅ - C ₈)	mg/kg	5035A /8260 D	< 0.003	ND	ND	≤ 25
- Pentane	mg/kg					*
- Benzene	mg/kg					*
- Toluene	mg/kg					*
- m,p-Xylene	mg/kg					*
- o-Xylene	mg/kg					*
- Ethylbenzene	mg/kg					*
- TPH (C ₉ - C ₁₆)	mg/kg	3540C/8015 D	< 0.25	ND	1.46	≤ 25
- n-Nonane	mg/kg					*
- n-Decane	mg/kg					*
- n-Dodecane	mg/kg					*
- n-Tetradecane	mg/kg					*
- n-Hexadecane	mg/kg					*
- TPH (C ₁₆ - C ₃₂)	mg/kg	3540C/8015 D	< 1.85	ND	5.32	≤ 8
- n-Octadecane	mg/kg					*
- n-Eicosane	mg/kg					*
- n-Docosane	mg/kg					*
- n-Tetracosane	mg/kg					*
- n-Hexacosane	mg/kg					*
- n-Octacosane	mg/kg					*
- n-Triacontane	mg/kg					*
- n-Dotriacontane	mg/kg					*
- n-Tetracontane	mg/kg					*
- Pentatriacontane	mg/kg					*

REFERENCE: U.S. EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE 1st ED. 2001

Sudaporn S.
(Miss Sudaporn Soonthorn)
Analyst
REG. NO. 7-239-ท-0001

(Mrs. Araya Tippanik)
Technical Management Team
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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0583/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 26/03/2024	SAMPLING TIME	: 09:10-09:24, 09:31-09:43
RECEIVED DATE	: 27/03/2024	ANALYTICAL DATE	: 27-28/03/2024, 04-06/04/2024
REPORT DATE	: 17/04/2024	SITE OPERATOR	: Mr. Baworn Deechaiya
SAMPLE CONDITION	: Normal	FILE CODE	: 224003_Soil_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ¹⁾
				MW-105 B	MW-106 B	
Naphthalene	mg/kg	3540 C / 8270 E	< 0.005	ND	ND	≤ 1,000
Hexane	mg/kg	5035 A / 8260 D	< 0.001	ND	ND	≤ 1,000
Benzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 15
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, 3rd ED, 2000

Jularat Jaemruen

(Miss Jularat Jaemruen)

Analyst

REG. NO. 2-239-ก-0022

Araya Tipparuk

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Technical Management Team

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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0585/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 26/03/2024	SAMPLING TIME	: 09:10-09:24, 09:31-09:43
RECEIVED DATE	: 27/03/2024	ANALYTICAL DATE	: 27/03/2024-04/04/2024
REPORT DATE	: 17/04/2024	SITE OPERATOR	: Mr. Baworn Deechaiya
SAMPLE CONDITION	: Normal	FILE CODE	: 224003 Soil March

PARAMETER	UNIT	ANALYSIS	ND	STATION		STANDARD ¹⁾
		METHODS	(non-detectable)	MW-105 B	MW-106 B	
Total Petroleum Hydrocarbons						
- TPH (C ₅ - C ₆)	mg/kg	5035A /8260 D	< 0,003	ND	ND	≤ 25
- Pentane						
- Benzene						
- Toluene						
- m,p-Xylene						
- o-Xylene						
- Ethylbenzene						
- TPH (C ₇₋₈ - C ₁₆)	mg/kg	3540C/8015 D	< 0,25	ND	ND	≤ 25
- n-Nonane						
- n-Decane						
- n-Dodecane						
- n-Tetradecane						
- n-Hexadecane						
- TPH (C ₁₆ - C ₃₅)	mg/kg	3540C/8015 D	< 1,85	5,74	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 METHOD FOR EVALUATING WATER AND SOLID WASTE 3rd ED., 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-จ-0001

NR

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-น-0004

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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0585/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 25-26/03/2024	SAMPLING TIME	: 09:50-10:03, 11:03-11:18
RECEIVED DATE	: 27/03/2024	ANALYTICAL DATE	: 27-28/03/2024, 04-06/04/2024
REPORT DATE	: 17/04/2024	SITE OPERATOR	: Mr. Baworn Deechaiya
SAMPLE CONDITION	: Normal	FILE CODE	: 224003_Soil_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-108 B	MW-109 A	
Naphthalene	mg/kg	3540 C / 8270 E	< 0.005	ND	ND	≤ 1,000
Hexane	mg/kg	5035 A / 8260 D	< 0.001	ND	ND	≤ 1,000
Benzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 15
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 : U.S. EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOIL WASTES, 1st EDITION

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 2-239-ก-0022

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SOIL SAMPLES ANALYSIS REPORT

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SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 25-26/03/2024	SAMPLING TIME	: 09:50-10:03, 11:03-11:18
RECEIVED DATE	: 27/03/2024	ANALYTICAL DATE	: 27/03/2024-04/04/2024
REPORT DATE	: 17/04/2024	SITE OPERATOR	: Mr. Baworn Deechaiya
SAMPLE CONDITION	: Normal	FILE CODE	: 224003_Soil_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-108 B	MW-109 A	
Total Petroleum Hydrocarbons						
- TPH (C ₅ - C ₉)	mg/kg	5035A /8260 D	< 0.003	ND	ND	≤ 25
- Pentane						
- Benzene						
- Toluene						
- m,p-Xylene						
- o-Xylene						
- Ethylbenzene						
- TPH (C ₁₀ - C ₁₆)	mg/kg	3540C/8015 D	< 0.25	ND	ND	≤ 25
- n-Nonane						
- n-Decane						
- n-Dodecane						
- n-Tetradecane						
- n-Hexadecane						
- TPH (C ₁₈ - C ₃₃)	mg/kg	3540C/8015 D	< 1.85	6.15	17.05	≤ 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, 1ST ED., 2020

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 7-239-0-0001

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(Mrs. Araya Tipparuk)

Technical Management Team

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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REQUEST SERVICE No.	: 0585/67
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 25/03/2024	SAMPLING TIME	: 11:03-11:18, 10:22-10:32
RECEIVED DATE	: 27/03/2024	ANALYTICAL DATE	: 27-28/03/2024, 04-06/04/2024
REPORT DATE	: 17/04/2024	SITE OPERATOR	: Mr. Baworn Deechaiya
SAMPLE CONDITION	: Normal	FILE CODE	: 224003_Soil_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ^{1/}
				MW-112 A	MW-113 A	
Naphthalene	mg/kg	3540 C / 8270 E	< 0.005	ND	ND	≤ 1,000
Hexane	mg/kg	5035 A / 8260 D	< 0.001	ND	ND	≤ 1,000
Benzene	mg/kg	5035 A / 8260 D	< 0.00025	ND	ND	≤ 15
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 : U.S EPA SW 846 TEST METHODS FOR EVALUATING WATER AND SOIL BY WASTE 3rd Ed. 2000

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

REG. NO. 1-239-0-0022

Araya Tipparuk

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SOIL SAMPLES ANALYSIS REPORT

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SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 25/03/2024	SAMPLING TIME	: 11:03-11:18, 10:22-10:32
RECEIVED DATE	: 27/03/2024	ANALYTICAL DATE	: 27/03/2024-04/04/2024
REPORT DATE	: 17/04/2024	SITE OPERATOR	: Mr. Baworn Ducchaiya
SAMPLE CONDITION	: Normal	FILE CODE	: 224003 Soil March

PARAMETER	UNIT	ANALYSIS	ND	STATION		STANDARD ^{1/}
		METHODS	(non-detectable)	MW-112 A	MW-113 A	
Total Petroleum Hydrocarbons						
- TPH (C ₅ - C ₁₆)	mg/kg	5035A /8260 D	< 0.003	ND	ND	≤ 25
- Pentane						
- Benzene						
- Toluene						
- m,p-Xylene						
- o-Xylene						
- Ethylbenzene						
- TPH (C ₉ - C ₁₆)	mg/kg	3540C/8015 D	< 0.25	ND	ND	≤ 25
- n-Nonane						
- n-Decane						
- n-Dodecane						
- n-Tetradecane						
- n-Hexadecane						
- TPH (C ₁₀ - C ₂₉)	mg/kg	3540C/8015 D	< 1.85	7.11	6.93	≤ 8
- n-Octadecane						
- n-Eicosane						
- n-Docosane						
- n-Tetracosane						
- n-Hexacosane						
- n-Octacosane						
- n-Triacontane						
- n-Dotriacontane						
- n-Tetracontane						
- Pentatriacontane						

REFERENCE : USEPA SW-746 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1st ED., 2001

Sudaporn S.

(Miss Sudaporn Soonthorn)

Analyst

REG. NO. 2-239-ก-0001

Araya T.

(Mrs. Araya Tippuruk)

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. ^{1/} Notification of the Ministry of Industry, B.E.2559 (2016).
 4. - Not available.

ใบรับรองผลการตรวจวัดระดับเสียงภายในสถานประกอบการ



Noise Monitoring Result : Working Noise

MTR-SPRC PLC-Refinery

Location : CDU (Near 02GM102A)

Monitor Period : Jan 22, 2026

SLM Model : SCARLET ST-21D

Serial No : 820725

Site Operator : Miss Wiraya Patchimboon

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : Oct 14 2025

SLM Reading / Adjust dB(A) : 93.8/0.0

Expire Date : Oct 13 2026

Cal Sheet No.: CR-515-2026-009

Time	Equivalent Sound Pressure Level (dB(A))	
	Jan 22, 2026	
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	88.2	
09:00 - 10:00	88.5	
10:00 - 11:00	87.5	
11:00 - 12:00	87.3	
12:00 - 13:00	87.3	
13:00 - 14:00	87.5	
14:00 - 15:00	87.3	
15:00 - 16:00	87.3	
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)*	87.6	
Lmax **	106.7	
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-SPRC PLC-Refinery

Location : NHTU (Near 08G102A-B)

Monitor Period : Jan 22, 2026

SLM Model : SCARLET ST-21D

Serial No : 821078

Site Operator : Miss Wiraya Patchimboon

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : Oct 14 2025

SLM Reading / Adjust dB(A) : 93.8/0.0

Expire Date : Oct 13 2026

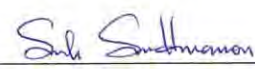
Cal Sheet No.: CR-515-2026-009

Time	Equivalent Sound Pressure Level (dB(A))
	Jan 22, 2026
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	87.4
09:00 - 10:00	87.3
10:00 - 11:00	87.0
11:00 - 12:00	86.9
12:00 - 13:00	87.1
13:00 - 14:00	87.0
14:00 - 15:00	86.8
15:00 - 16:00	86.6
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)*	87.0
Lmax **	103.7
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-SPRC PLC-Refinery

Location : Utility (During 41G103A-B)

Monitor Period : Jan 22, 2026

SLM Model : SCARLET ST-21D

Serial No : 821080

Site Operator : Miss Wiraya Patchimboon

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : Oct 14 2025

SLM Reading / Adjust dB(A) : 93.8/0.0

Expire Date : Oct 13 2026

Cal Sheet No.: CR-515-2026-009

Time	Equivalent Sound Pressure Level (dB(A))	
	Jan 22, 2026	
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	88.2	
09:00 - 10:00	87.9	
10:00 - 11:00	87.8	
11:00 - 12:00	88.0	
12:00 - 13:00	88.2	
13:00 - 14:00	87.8	
14:00 - 15:00	88.2	
15:00 - 16:00	88.1	
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)*	88.0	
Lmax **	99.7	
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-SPRC PLC-Refinery

Location : RFCCU (Near 17GM102A-B)

Monitor Period : Jan 22, 2026

SLM Model : SCARLET ST-21D

Serial No : 821082

Site Operator : Miss Wiraya Patchimboon

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : Oct 14 2025

SLM Reading / Adjust dB(A) : 93.8/0.0

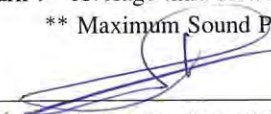
Expire Date : Oct 13 2026

Cal Sheet No.: CR-515-2026-009

Time	Equivalent Sound Pressure Level (dB(A))	
	Jan 22, 2026	
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	88.4	
09:00 - 10:00	88.4	
10:00 - 11:00	88.0	
11:00 - 12:00	88.0	
12:00 - 13:00	88.0	
13:00 - 14:00	88.0	
14:00 - 15:00	87.9	
15:00 - 16:00	87.9	
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)*	88.1	
Lmax **	94.4	
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-SPRC PLC-Refinery

Location : CDU (Near 02GM102A)

Monitor Period : May 22, 2026

SLM Model : SCARLET ST-21D

Serial No : 820731

Site Operator : Miss Wiraya Patchimboon

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : Oct 14 2025

SLM Reading / Adjust dB(A) : 93.8/0.0

Expire Date : Oct 13 2026

Cal Sheet No.: CR-515-2026-132

Time	Equivalent Sound Pressure Level (dB(A))	
	May 22, 2026	
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	86.1	
09:00 - 10:00	86.0	
10:00 - 11:00	86.1	
11:00 - 12:00	86.4	
12:00 - 13:00	86.2	
13:00 - 14:00	86.0	
14:00 - 15:00	86.1	
15:00 - 16:00	86.1	
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)*	86.1	
Lmax **	91.5	
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

Sununta Sirawuttinanon

(Miss Sununta Sirawuttinanon)
Technical Management Team



Noise Monitoring Result : Working Noise

MTR-SPRC PLC-Refinery

Location : NHTU (Near 08G102A-B)

Monitor Period : May 22, 2026

SLM Model : SCARLET ST-21D

Serial No : 820724

Site Operator : Miss Wiraya Patchimboon

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : Oct 14 2025

SLM Reading / Adjust dB(A) : 93.8/0.0

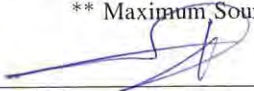
Expire Date : Oct 13 2026

Cal Sheet No.: CR-515-2026-132

Time	Equivalent Sound Pressure Level (dB(A))	
	May 22, 2026	
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	85.3	
09:00 - 10:00	85.1	
10:00 - 11:00	85.6	
11:00 - 12:00	85.4	
12:00 - 13:00	85.3	
13:00 - 14:00	85.3	
14:00 - 15:00	85.8	
15:00 - 16:00	85.8	
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)*	85.5	
Lmax **	98.5	
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-SPRC PLC-Refinery

Location : Utility (During 41G103A-B)

Monitor Period : Jun 30, 2026

SLM Model : SCARLET ST-21D

Serial No : 820728

Site Operator : Miss Wiraya Patchimboon

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : Oct 14 2025

SLM Reading / Adjust dB(A) : 93.8/0.0

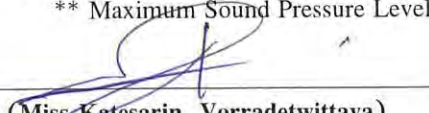
Expire Date : Oct 13 2026

Cal Sheet No.: CR-515-2026-162

Time	Equivalent Sound Pressure Level (dB(A))	
	Jun 30, 2026	
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	89.8	
08:00 - 09:00	89.8	
09:00 - 10:00	89.7	
10:00 - 11:00	89.5	
11:00 - 12:00	89.5	
12:00 - 13:00	89.4	
13:00 - 14:00	89.5	
14:00 - 15:00	89.6	
15:00 - 16:00		
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)*	89.6	
Lmax **	90.9	
Standard-8Hr	90 dB(A)	
Standard-Max	140 dB(A)	

Remark : * Average time between 07:00-15:00

** Maximum Sound Pressure Level between 07:00-15:00


(Miss Katesarin Vorradetwittaya)
Environmental Scientist


(Miss Sununta Sirawuttinanon)
Technical Management Team



Noise Monitoring Result : Working Noise

MTR-SPRC PLC-Refinery

Location : RFCCU (Near 17GM102A-B)

Monitor Period : May 22, 2026

SLM Model : SCARLET ST-21D

Serial No : 821079

Site Operator : Miss Wiraya Patchimboon

Calibrator Model : Cirrus CR:515

Serial No : 97097

Calibration Ref dB(A) : 94.0

Certified Date : Oct 14 2025

SLM Reading / Adjust dB(A) : 93.8/0.0

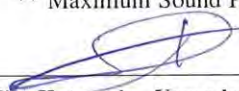
Expire Date : Oct 13 2026

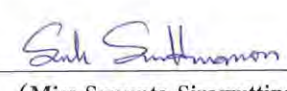
Cal Sheet No.: CR-515-2026-132

Time	Equivalent Sound Pressure Level (dB(A))	
	May 22, 2026	
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	87.2	
09:00 - 10:00	87.0	
10:00 - 11:00	87.7	
11:00 - 12:00	88.2	
12:00 - 13:00	88.3	
13:00 - 14:00	88.0	
14:00 - 15:00	88.1	
15:00 - 16:00	88.5	
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)*	87.9	
Lmax **	96.2	
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



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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 : Star Petroleum Refining Public Co., Ltd. REFERENCE NO. : 226005-Noise Dose-2601-0167
MEASUREMENT BY : SECOT Co., Ltd. MEASUREMENT DATE : 22/01/2026
OPERATOR : Miss Wiraya Patchimboon INSTRUMENT : Dosimeter
INSTRUMENT MODEL : Cirrus CR110A INSTRUMENT SERIAL NO. : CB1041
CALIBRATOR MODEL : CIRRUS RC 110A CALIBRATOR SERIAL NO. : 95167
CALIBRATION REF. : 1,000 Hz, 114 dB CALIBRATION DATE : 21/02/2025
READING / ADJUST : 113.9 / 0.1 EXPIRE DATE : 20/02/2026
CAL SHEET NO. : NC-CIRRUS-2026-001

OPERATOR ID	RESPONSIBILITY/AREA	TIME	% DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
ID#110779	Operator Area 1 (CDU/VDU)	07.08-19.00	91.3	82.9	83.0

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Sirawuttinanon)

(Miss Sununta Sirawuttinanon)

Technical Management Team

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 4. TWA means Time Weighted Average.



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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226005-Noise Dose-2601-0167
MEASUREMENT BY	: SECOT Co., Ltd.	MEASUREMENT DATE	: 22/01/2026
OPERATOR	: Miss Wiraya Patchimboon	INSTRUMENT	: Dosimeter
INSTRUMENT MODEL	: Cirrus CR110A	INSTRUMENT SERIAL NO.	: CB1040
CALIBRATOR MODEL	: CIRRUS RC 110A	CALIBRATOR SERIAL NO.	: 95167
CALIBRATION REF.	: 1,000 Hz, 114 dB	CALIBRATION DATE	: 21/02/2025
READING / ADJUST	: 113.5 / 0.5	EXPIRE DATE	: 20/02/2026
CAL SHEET NO.	: NC-CIRRUS-2026-001		

OPERATOR ID	RESPONSIBILITY/AREA	TIME	% DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
ID#110902	Operator, Area 2 (NHTU, DHTU, WCN, BSU)	07.09-19.00	45.9	79.9	83.0

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Sirawuttinanon)

Technical Management Team

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

NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226005-Noise Dose-2601-0167
MEASUREMENT BY	: SECOT Co., Ltd.	MEASUREMENT DATE	: 22/01/2026
OPERATOR	: Miss Wiraya Patchimboon	INSTRUMENT	: Dosimeter
INSTRUMENT MODEL	: Cirrus CR110A	INSTRUMENT SERIAL NO.	: CB1025
CALIBRATOR MODEL	: CIRRUS RC 110A	CALIBRATOR SERIAL NO.	: 95167
CALIBRATION REF.	: 1,000 Hz, 114 dB	CALIBRATION DATE	: 21/02/2025
READING / ADJUST	: 114.1 / -0.1	EXPIRE DATE	: 20/02/2026
CAL SHEET NO.	: NC-CIRRUS-2026-001		

OPERATOR ID	RESPONSIBILITY/AREA	TIME	% DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
ID#110298	Operator	07.09-19.00	78.5	82.2	83.0
	Area 3 (SRU, Utility)				

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Sirawuttinanon)

Technical Management Team

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

NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME : Star Petroleum Refining Public Co., Ltd. REFERENCE NO. : 226005-Noise Dose-2601-0167
MEASUREMENT BY : SECOT Co., Ltd. MEASUREMENT DATE : 22/01/2026
OPERATOR : Miss Wiraya Patchimboon INSTRUMENT : Dosimeter
INSTRUMENT MODEL : Cirrus CR110A INSTRUMENT SERIAL NO. : CB1023

CALIBRATOR MODEL : CIRRUS RC 110A CALIBRATOR SERIAL NO. : 95167
CALIBRATION REF. : 1,000 Hz, 114 dB CALIBRATION DATE : 21/02/2025
READING / ADJUST : 111.4 / 2.6 EXPIRE DATE : 20/02/2026
CAL SHEET NO. : NC-CIRRUS-2026-001

OPERATOR ID	RESPONSIBILITY/AREA	TIME	% DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
ID#110900	Operator	07.08-19.00	55.9	80.7	83.0
	Area 4 (RFCCU)				

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Sirawuttinanon)

Technical Management Team

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

NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226005-Noise Dose-2606-0241
MEASUREMENT BY	: SECOT Co., Ltd.	MEASUREMENT DATE	: 30/06/2026
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	: 20/04/2026
READING / ADJUST	: 112.6 / 1.4	EXPIRE DATE	: 19/04/2026
CAL SHEET NO.	: NC-PULSAR-2026-037		

OPERATOR ID	RESPONSIBILITY/AREA	TIME	% DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
ID#110547	Operator	07.51-19.00	1.3	64.4	83.0
	Area 1 (CDU/VDU)				

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Sirawuttinanon)

Technical Management Team

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 4. TWA means Time Weighted Average.



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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226005-Noise Dose-2605-0069
MEASUREMENT BY	: SECOT Co., Ltd.	MEASUREMENT DATE	: 22/05/2026
OPERATOR	: Miss Wiraya Patchimboon	INSTRUMENT	: Dosimeter
INSTRUMENT MODEL	: Cirrus CR110A	INSTRUMENT SERIAL NO.	: CB1054
CALIBRATOR MODEL	: CIRRUS RC 110A	CALIBRATOR SERIAL NO.	: 95167
CALIBRATION REF.	: 1,000 Hz, 114 dB	CALIBRATION DATE	: 02/03/2026
READING / ADJUST	: 112.7 / 1.3	EXPIRE DATE	: 01/03/2027
CAL SHEET NO.	: NC-CIRRUS-2026-087		

OPERATOR ID	RESPONSIBILITY/AREA	TIME	% DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
ID#110772	Operator, Area 2 (NHTU, DHTU, WCN, BSU)	07.37-19.00	14.4	74.9	83.0

(Miss Katesarin Vorradetwittaya)

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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226005-Noise Dose-2605-0069
MEASUREMENT BY	: SECOT Co., Ltd.	MEASUREMENT DATE	: 22/05/2026
OPERATOR	: Miss Wiraya Patchimboon	INSTRUMENT	: Dosimeter
INSTRUMENT MODEL	: Cirrus CR110A	INSTRUMENT SERIAL NO.	: CB1053
CALIBRATOR MODEL	: CIRRUS RC 110A	CALIBRATOR SERIAL NO.	: 95167
CALIBRATION REF.	: 1,000 Hz, 114 dB	CALIBRATION DATE	: 02/03/2026
READING / ADJUST	: 112.6 / 1.4	EXPIRE DATE	: 01/03/2027
CAL SHEET NO.	: NC-CIRRUS-2026-087		

OPERATOR ID	RESPONSIBILITY/AREA	TIME	% DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
ID#110851	Operator	07.34-19.00	1.3	64.5	83.0
	Area 3 (SRU, Utility)				

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

Sununta Sirawuttinanon

(Miss Sununta Sirawuttinanon)

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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME	: Star Petroleum Refining Public Co., Ltd.	REFERENCE NO.	: 226005-Noise Dose-2605-0069
MEASUREMENT BY	: SECOT Co., Ltd.	MEASUREMENT DATE	: 22/05/2026
OPERATOR	: Miss Wiraya Patchimboon	INSTRUMENT	: Dosimeter
INSTRUMENT MODEL	: Cirrus CR110A	INSTRUMENT SERIAL NO.	: CB1101
CALIBRATOR MODEL	: CIRRUS RC 110A	CALIBRATOR SERIAL NO.	: 95167
CALIBRATION REF.	: 1,000 Hz, 114 dB	CALIBRATION DATE	: 02/03/2026
READING / ADJUST	: 112.8 / 1.2	EXPIRE DATE	: 01/03/2027
CAL SHEET NO.	: NC-CIRRUS-2026-087		

OPERATOR ID	RESPONSIBILITY/AREA	TIME	% DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
ID#110681	Operator Area 4 (RFCCU)	07.38-19.00	82.5	82.4	83.0

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