

ภาคผนวก ง

ค่ามาตรฐานคุณภาพน้ำ

ภาคผนวก ง.1

ค่ามาตรฐานคุณภาพน้ำทิ้ง

**ตารางที่ ง.1-1 ผลการตรวจวัดปริมาณของแข็งที่ละลายได้ทั้งหมดในน้ำทะเล
และค่ามาตรฐานปริมาณของแข็งที่ละลายได้ทั้งหมดในน้ำทิ้ง
โรงไฟฟ้าพลังความร้อนร่วม 640 เมกะวัตต์
บริษัท โกลว์ เอสพีพี 3 จำกัด**

วันที่ ทำการตรวจวัด	ผลการตรวจวัดปริมาณของแข็ง ที่ละลายได้ทั้งหมดในน้ำทะเล ณ จุดสูบน้ำเข้า (มิลลิกรัมต่อลิตร)	ค่ามาตรฐานปริมาณของแข็ง ที่ละลายได้ทั้งหมดในน้ำทิ้ง (มิลลิกรัมต่อลิตร) ^{1/}
5 มกราคม 2565	35,220	40,220
12 มกราคม 2565	35,520	40,520
19 มกราคม 2565	36,700	41,700
26 มกราคม 2565	37,020	42,020
2 กุมภาพันธ์ 2565	34,860	39,860
9 กุมภาพันธ์ 2565	36,700	41,700
17 กุมภาพันธ์ 2565	35,700	40,700
23 กุมภาพันธ์ 2565	33,780	38,780
2 มีนาคม 2565	35,920	40,920
9 มีนาคม 2565	35,260	40,260
16 มีนาคม 2565	37,580	42,580
23 มีนาคม 2565	37,800	42,800
30 มีนาคม 2565	34,940	39,940
4 เมษายน 2565	36,360	41,360
11 เมษายน 2565	35,000	40,000
20 เมษายน 2565	36,600	41,600
27 เมษายน 2565	35,800	40,800
6 พฤษภาคม 2565	36,980	41,980
11 พฤษภาคม 2565	35,760	40,760
18 พฤษภาคม 2565	35,500	40,500
25 พฤษภาคม 2565	39,040	44,040
1 มิถุนายน 2565	33,860	38,860
8 มิถุนายน 2565	35,960	40,960
15 มิถุนายน 2565	36,460	41,460
22 มิถุนายน 2565	33,180	38,180
29 มิถุนายน 2565	36,540	41,540

หมายเหตุ: ^{1/} ค่ามาตรฐานตามประกาศกระทรวงทรัพยากรธรรมชาติและสิ่งแวดล้อม พ.ศ.2559

และประกาศกระทรวงอุตสาหกรรม พ.ศ.2560 กำหนดค่ามาตรฐานของปริมาณของแข็งที่ละลายได้ทั้งหมดในน้ำทิ้ง
มีค่าเกินกว่าค่าปริมาณของแข็งที่ละลายได้ทั้งหมดที่มีอยู่ในแหล่งน้ำนั้นได้ไม่เกิน 5,000 มก./ล.

ภาคผนวก ง.2

ค่ามาตรฐานคุณภาพน้ำทะเล

ตารางที่ ง.2-1

ค่ามาตรฐานคุณภาพน้ำทะเลชายฝั่ง ประจำปี พ.ศ.2565

โรงไฟฟ้าพลังความร้อนร่วม 640 เมกะวัตต์

บริษัท โกลว์ เอสพีที 3 จำกัด

Parameter	Unit	Standard
อุณหภูมิ (Temperature)	°C	$\Delta \leq 2^{1/}$
ความเป็นกรด-ด่าง (pH)	-	7.0-8.5
ความเค็ม (Salinity)	ppt	$\Delta \leq 10 \%^{2/}$
การนำไฟฟ้า (Conductivity)	us/cm	-
ปริมาณของแข็งที่ละลายน้ำทั้งหมด (TDS)	mg/l	-
ความขุ่น (Turbidity)	NTU	-
ปริมาณออกซิเจนละลายน้ำ (DO)	mg/l	≥ 4.0
ความโปร่งใส (Transparency)	m	$\Delta \leq 10 \%^{3/}$
สารแขวนลอย (SS)	mg/l	See Remark ^{4/}
บีโอดี (BOD ₅)	mg/l	-
คลอรีนคงเหลือ (Residual Chlorine)	mg/l	≤ 0.01
ปิโตรเลียมไฮโดรคาร์บอน (Petroleum Hydrocarbon)	µg/l	≤ 5
ปรอท (Hg)	µg/l	≤ 0.1
อาร์เซนิก (As)	µg/l	≤ 10
เหล็ก (Fe)	µg/l	≤ 300
ตะกั่ว (Pb)	µg/l	≤ 8.5
ซีลีเนียม (Se)	µg/l	-

หมายเหตุ :

1. ค่ามาตรฐานตามประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ พ.ศ.2560 (บังคับใช้ตั้งแต่วันที่ 23 พฤศจิกายน พ.ศ.2560 เป็นต้นไป)

2. ^{1/} $\Delta \leq 2$ หมายถึง เปลี่ยนแปลงเพิ่มขึ้นไม่เกิน 2 องศาเซลเซียส จากสภาพธรรมชาติ

3. ^{2/} $\Delta \leq 10 \%$ หมายถึง มีค่าเปลี่ยนแปลงไม่เกินร้อยละ 10 ของค่าความเค็มต่ำสุด (ตารางที่ ง.2-2)

4. ^{3/} $\Delta \leq 10 \%$ หมายถึง มีค่าลดลงจากสภาพธรรมชาติไม่เกินร้อยละ 10 จากค่าความโปร่งใสต่ำสุด (ตารางที่ ง.2-3)

5. ^{4/} สารแขวนลอย (Suspended Solids) มีค่าเปลี่ยนแปลงเพิ่มขึ้นไม่เกินผลรวมของค่าเฉลี่ย 1 วัน หรือ 1 เดือน หรือ 1 ปี บวกกับค่าเบี่ยงเบนมาตรฐานของค่าเฉลี่ยนั้นๆ (ตารางที่ ง.2-4)

ตารางที่ ง.2-2

ค่ามาตรฐานความเค็ม ประจำปี พ.ศ.2565

โรงไฟฟ้าพลังความร้อนร่วม 640 เมกะวัตต์

บริษัท โกลว์ เอสพีที 3 จำกัด

เดือน	ค่ามาตรฐาน *						
	ค่าความเค็มต่ำสุดรายเดือน ปี พ.ศ.2564 (ppt)						
	A	B	C	D	E	I	O
มกราคม	32.3	32.3	31.3	32.2	32.2	32.3	31.4
กุมภาพันธ์	31.5	31.8	31.6	31.5	31.5	31.5	31.4
มีนาคม	30.9	31.2	31.0	30.6	31.0	31.1	30.9
เมษายน	31.3	31.5	31.3	31.4	31.5	31.6	29.9
พฤษภาคม	31.2	31.2	31.0	31.5	31.5	31.4	31.3
มิถุนายน	31.1	32.2	32.1	32.2	32.4	32.0	31.9
กรกฎาคม	32.3	32.6	32.3	32.6	32.2	32.5	30.5
สิงหาคม	31.9	30.9	30.4	30.8	30.6	31.0	30.1
กันยายน	31.5	31.8	30.8	30.1	31.6	31.4	30.0
ตุลาคม	31.0	31.2	30.9	31.1	30.7	30.6	30.1
พฤศจิกายน	30.8	31.0	30.8	30.8	31.1	31.0	31.0
ธันวาคม	31.1	31.5	31.0	31.3	31.3	31.1	31.5

หมายเหตุ :

* ค่ามาตรฐานตามประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ พ.ศ.2560

กำหนดให้ค่าความเค็มมีค่าเปลี่ยนแปลงไม่เกินร้อยละ 10 ของค่าความเค็มต่ำสุดแต่ละเดือนในปีที่ผ่านมา

ตารางที่ ง.2-3 ค่ามาตรฐานความโปร่งใส ประจำปี พ.ศ.2565
โรงไฟฟ้าพลังความร้อนร่วม 640 เมกะวัตต์
บริษัท โกลว์ เอสพีที 3 จำกัด

เดือน	ค่ามาตรฐาน*						
	ค่าความโปร่งใสต่ำสุดรายเดือน ปี พ.ศ.2564 (เมตร)						
	A	B	C	D	E	I	O
มกราคม	1.4	1.5	1.5	1.5	1.4	2.1	1.3
กุมภาพันธ์	1.7	1.6	1.5	1.5	1.6	2.3	1.5
มีนาคม	1.4	1.6	1.5	1.2	1.3	1.9	1.4
เมษายน	1.5	1.5	1.3	1.5	1.3	1.7	1.2
พฤษภาคม	1.2	1.3	1.3	1.0	1.2	1.9	1.0
มิถุนายน	1.0	1.1	1.4	1.3	1.3	1.9	1.1
กรกฎาคม	1.1	1.2	1.4	1.1	1.2	2.0	1.1
สิงหาคม	1.1	1.3	1.4	1.2	1.2	2.0	1.1
กันยายน	1.2	1.4	1.1	1.4	1.5	2.2	1.3
ตุลาคม	1.6	1.3	1.2	1.4	1.6	2.0	1.4
พฤศจิกายน	1.4	1.8	1.4	1.5	1.6	2.0	1.3
ธันวาคม	1.5	1.5	1.6	1.4	1.5	1.9	1.5

หมายเหตุ : * ค่ามาตรฐานตามประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ พ.ศ.2560
กำหนดให้ค่าความโปร่งใสมีค่าลดลงจากสภาพธรรมชาติ ไม่เกินร้อยละ 10 จากค่าความโปร่งใสต่ำสุด
ของแต่ละเดือนในปีที่ผ่านมา

ตารางที่ ง.2-4 ค่ามาตรฐานปริมาณสารแขวนลอยของน้ำทะเล ประจำปี พ.ศ.2565
โรงไฟฟ้าพลังความร้อนร่วม 640 เมกะวัตต์
บริษัท โกลว์ เอสพีที 3 จำกัด

เดือน	ผลการตรวจวัด (มก./ล.)						
	A	B	C	D	E	I	O
มกราคม	5.30	6.27	5.23	4.25	6.41	4.57	6.31
กุมภาพันธ์	7.10	6.59	6.94	7.98	9.45	4.60	7.46
มีนาคม	5.44	3.98	5.30	6.69	6.90	2.80	5.89
เมษายน	4.21	4.28	5.81	4.84	4.67	4.17	8.85
พฤษภาคม	5.39	7.79	9.68	7.73	8.01	6.37	10.50
มิถุนายน	12.12	11.27	9.04	13.69	8.01	8.69	19.22
กรกฎาคม	12.92	8.89	9.21	12.61	12.04	3.82	8.39
สิงหาคม	14.33	10.31	10.29	15.40	20.28	5.03	28.03
กันยายน	5.75	5.42	9.58	6.93	5.11	4.10	6.79
ตุลาคม	7.14	8.21	7.70	10.42	6.24	5.09	9.85
พฤศจิกายน	3.93	4.06	3.59	3.83	4.89	3.21	5.00
ธันวาคม	4.21	3.13	4.09	6.53	4.41	2.94	5.85
ค่ามาตรฐาน *	12.22	10.78	11.64	13.91	13.03	7.51	17.94
(Average + Standard Deviation (SD))							

หมายเหตุ : * ค่ามาตรฐานตามประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ พ.ศ.2560 โดยกำหนดให้สารแขวนลอย (Suspended Solids)
มีค่าเปลี่ยนแปลงเพิ่มขึ้นไม่เกินผลรวมของค่าเฉลี่ย 1 วัน หรือ 1 เดือน หรือ 1 ปี บวกกับค่าเบี่ยงเบนมาตรฐานของค่าเฉลี่ยนั้นๆ
โดยค่าเฉลี่ย 1 วัน ให้วัดทุกชั่วโมง หรืออย่างน้อย 5 ครั้ง ที่ช่วงเวลาเท่าๆ กัน ค่าเฉลี่ย 1 เดือน ให้วัดทุกวันหรืออย่างน้อย 4 ครั้ง
ที่ช่วงเวลาเท่าๆ กัน ใน 1 เดือน ณ เวลาเดียวกัน และค่าเฉลี่ย 1 ปี ให้วัดทุกเดือน ณ วันที่และเวลาเดียวกัน
ในที่นี้เลือกใช้ค่าเฉลี่ย 1 ปี โดยวัดทุกเดือน ณ ช่วงเวลาเดียวกัน

ภาคผนวก จ

ใบรับรองผลการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม

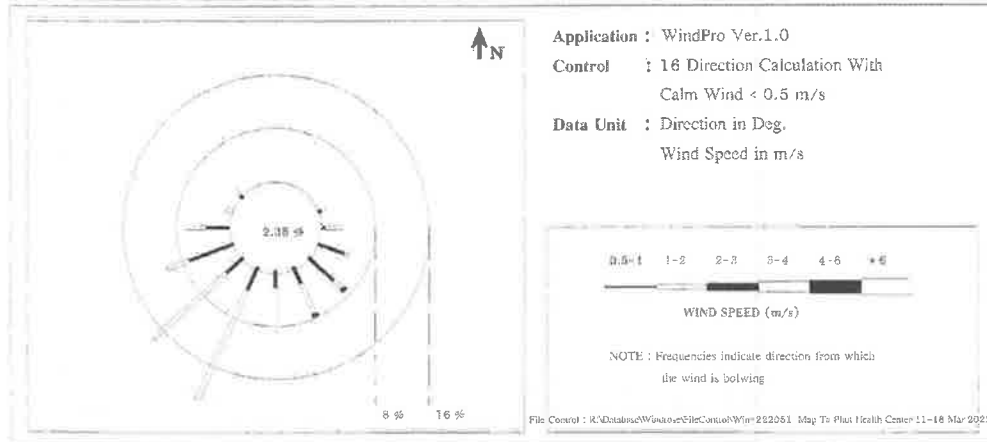
คุณภาพอากาศในบรรยากาศ



Meteorological Monitoring Results : Wind Rose MTR-Glow SPP2&3

Location : Map Ta Phut Health Center Monitor period : 11-18 Mar 2022
Wind Speed Model : NRG Symphonic Serial No : A4902
Wind Direction Model : NRG Symphonic Serial No : A4902

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	
N	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0060	0.0000	0.0000	0.0000	0.0000	0.0000	0.0060
E	0.0060	0.0238	0.0000	0.0000	0.0000	0.0000	0.0298
ESE	0.0417	0.0060	0.0000	0.0000	0.0000	0.0000	0.0476
SE	0.0536	0.0179	0.0060	0.0000	0.0000	0.0000	0.0774
SSE	0.0298	0.0536	0.0060	0.0000	0.0000	0.0000	0.0893
S	0.0298	0.0714	0.0000	0.0000	0.0000	0.0000	0.1012
SSW	0.0417	0.1964	0.0000	0.0000	0.0000	0.0000	0.2381
SW	0.0357	0.1548	0.0000	0.0000	0.0000	0.0000	0.1905
WSW	0.0714	0.0357	0.0000	0.0000	0.0000	0.0000	0.1071
W	0.0357	0.0298	0.0000	0.0000	0.0000	0.0000	0.0655
WNW	0.0000	0.0119	0.0000	0.0000	0.0000	0.0000	0.0119
NW	0.0060	0.0060	0.0000	0.0000	0.0000	0.0000	0.0119
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM				0.0238			



(Miss Katesarin Vorradetwittaya)
Environmental Scientist

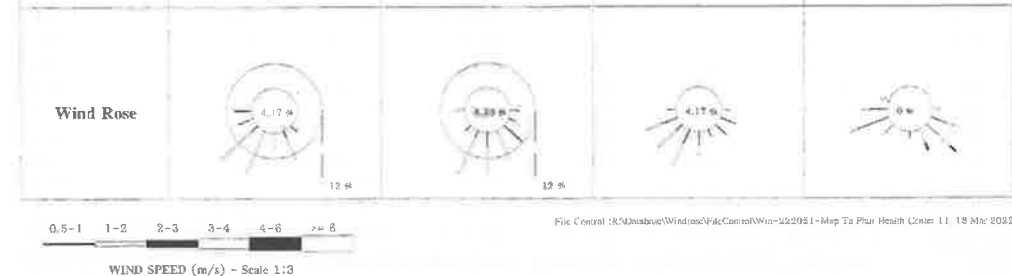
Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-Glow SPP2&3

Location : Map Ta Phut Health Center Monitor period : 11-18 Mar 2022
Wind Speed Model : NRG Symphonic Serial No : A4902
Wind Direction Model : NRG Symphonic Serial No : A4902

Time	11-12 Mar 2022		12-13 Mar 2022		13-14 Mar 2022		14-15 Mar 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
10:00 - 11:00	0.9	W	1.5	SSE	0.8	ESE	0.8	ESE
11:00 - 12:00	0.7	WSW	1.3	SSE	0.8	WSW	0.9	WSW
12:00 - 13:00	0.9	W	1.2	SSE	1.2	SW	1.1	WSW
13:00 - 14:00	1.4	SSW	1.2	SSE	1.1	WSW	1.7	E
14:00 - 15:00	1.5	SW	1.3	S	1.4	SW	1.8	ESE
15:00 - 16:00	1.1	SW	1.5	SSW	1.1	SW	1.9	SE
16:00 - 17:00	0.7	SW	1.8	SSW	1.2	WSW	2.1	SSE
17:00 - 18:00	0.5	WSW	0.6	S	1.0	SSW	2.2	SE
18:00 - 19:00	0.7	WSW	0.2	SSW	1.0	ESE	2.0	SSE
19:00 - 20:00	1.2	SSW	0.3	SSW	0.7	SW	2.0	SSE
20:00 - 21:00	1.2	SW	0.9	S	0.9	SSW	1.9	WNW
21:00 - 22:00	1.2	SW	1.4	S	1.1	SSW	1.4	SE
22:00 - 23:00	1.2	SSW	1.7	SSW	1.0	SSW	0.6	SE
23:00 - 24:00	1.0	SSW	1.6	S	1.2	SSW	0.5	SE
00:00 - 01:00	1.5	SSW	1.2	SSW	1.1	S	1.0	S
01:00 - 02:00	1.7	SW	1.3	SSW	0.5	S	0.6	ESE
02:00 - 03:00	1.5	SSW	0.7	SSW	0.1	SSW	0.9	WSW
03:00 - 04:00	1.4	SSE	0.9	SW	0.7	SSE	1.1	SW
04:00 - 05:00	1.3	SSE	1.1	W	0.9	S	1.0	SW
05:00 - 06:00	0.7	SE	0.8	E	1.0	SE	0.7	W
06:00 - 07:00	0.9	SSE	0.9	ESE	1.3	E	0.9	WSW
07:00 - 08:00	1.3	SSE	1.0	SE	0.6	WSW	0.9	WSW
08:00 - 09:00	1.2	S	0.6	SE	0.8	SE	0.9	W
09:00 - 10:00	1.6	S	0.6	SE	0.7	W	1.3	W



(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-Glow SPP2&3

Location : Map Ta Phut Health Center

Monitor period : 11-18 Mar 2022

Wind Speed Model : NRG Symphonie

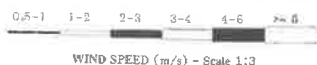
Serial No : A4902

Wind Direction Model : NRG Symphonie

Serial No : A4902

Time	15-16 Mar 2022		16-17 Mar 2022		17-18 Mar 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
10:00 - 11:00	1.3	WSW	1.2	SW	1.7	SSW
11:00 - 12:00	1.0	SW	1.2	SW	1.4	SSW
12:00 - 13:00	1.4	SSW	1.1	S	1.5	SSW
13:00 - 14:00	1.8	SW	1.1	SSW	1.6	SSW
14:00 - 15:00	1.9	SW	1.2	SSW	1.5	SSW
15:00 - 16:00	1.9	SW	1.3	SSW	1.4	SSW
16:00 - 17:00	1.8	WSW	1.3	SSW	1.3	S
17:00 - 18:00	1.6	WSW	1.3	SW	1.0	SSW
18:00 - 19:00	1.4	SW	1.3	SW	1.2	S
19:00 - 20:00	1.3	SW	1.2	SW	1.1	S
20:00 - 21:00	1.2	SW	1.1	SW	1.0	S
21:00 - 22:00	1.1	SSW	1.0	SW	1.1	SSW
22:00 - 23:00	1.3	SSW	0.9	SSW	1.2	SSW
23:00 - 24:00	1.4	W	0.9	SSW	1.4	SW
00:00 - 01:00	1.9	NW	0.9	SSW	0.8	WSW
01:00 - 02:00	1.7	WNW	0.9	SSW	0.5	WSW
02:00 - 03:00	1.4	W	0.6	SSE	0.7	WSW
03:00 - 04:00	1.3	E	0.7	SSE	0.9	WSW
04:00 - 05:00	1.2	E	0.6	SSE	1.2	SW
05:00 - 06:00	0.9	W	0.5	ENE	1.4	SW
06:00 - 07:00	1.0	W	0.8	ESE	1.5	SW
07:00 - 08:00	0.9	ESE	0.6	SE	1.5	SW
08:00 - 09:00	1.0	NW	1.2	S	1.7	SSW
09:00 - 10:00	1.1	SE	1.7	SSW	1.9	SSW

Wind Rose



File: C:\ndr\Win\ndr\Win-222051-Map Ta Phut Health Center 11-18 Mar 2022

(Signature)
(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Signature)
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-Glow SPP2&3

Location : Wat Map Chaloe

Monitor period : 11-18 Mar 2022

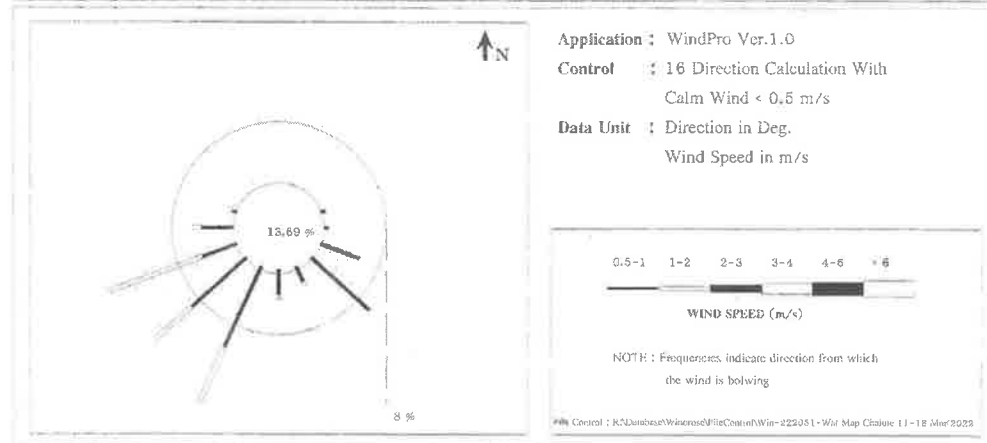
Wind Speed Model : NRG Symphonie

Serial No : A4904

Wind Direction Model : NRG Symphonie

Serial No : A4904

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	
N	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0060	0.0000	0.0000	0.0000	0.0000	0.0000	0.0060
E	0.0060	0.0000	0.0000	0.0000	0.0000	0.0000	0.0060
ESE	0.0536	0.0000	0.0000	0.0000	0.0000	0.0000	0.0536
SE	0.1071	0.0000	0.0000	0.0000	0.0000	0.0000	0.1071
SSE	0.0238	0.0060	0.0000	0.0000	0.0000	0.0000	0.0298
S	0.0357	0.0060	0.0000	0.0000	0.0000	0.0000	0.0417
SSW	0.1250	0.0833	0.0000	0.0000	0.0000	0.0000	0.2083
SW	0.1012	0.0655	0.0000	0.0000	0.0000	0.0000	0.1667
WSW	0.0476	0.1310	0.0000	0.0000	0.0000	0.0000	0.1786
W	0.0417	0.1119	0.0000	0.0000	0.0000	0.0000	0.0536
WNW	0.0060	0.0060	0.0000	0.0000	0.0000	0.0000	0.0119
NW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.1369						



(Signature)
(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Signature)
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-Glow SPP2&3

Location : Wat Map Chalute

Monitor period : 11-18 Mar 2022

Wind Speed Model : NRG Symphonie

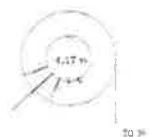
Serial No : A4904

Wind Direction Model : NRG Symphonie

Serial No : A4904

Time	11-12 Mar 2022		12-13 Mar 2022		13-14 Mar 2022		14-15 Mar 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
11:00 - 12:00	1.1	SW	0.8	SSW	0.7	ESE	0.3	ESE
12:00 - 13:00	0.9	SW	0.9	SSW	0.6	ESE	0.4	ESE
13:00 - 14:00	1.1	SW	0.9	S	0.5	ESE	0.4	ESE
14:00 - 15:00	1.3	SW	1.0	SSW	0.5	SE	0.7	E
15:00 - 16:00	1.2	SW	1.0	SSW	0.4	SE	0.8	ESE
16:00 - 17:00	1.3	SSW	1.1	SSW	0.6	S	0.7	ESE
17:00 - 18:00	1.4	SSW	1.1	SSW	0.7	SSE	0.8	ESE
18:00 - 19:00	1.6	SW	1.2	SSW	0.1	ENE	0.8	SE
19:00 - 20:00	1.5	WSW	1.1	SSW	0.2	WNW	0.9	SE
20:00 - 21:00	1.2	WSW	0.8	WSW	0.3	W	0.6	SE
21:00 - 22:00	1.0	WSW	0.7	WSW	0.6	W	0.5	SE
22:00 - 23:00	0.6	WSW	0.6	SSW	0.6	SE	0.5	SE
23:00 - 24:00	0.5	WSW	0.7	SW	0.8	SE	0.5	SE
00:00 - 01:00	0.7	SW	0.7	SSW	0.8	SE	0.6	SE
01:00 - 02:00	0.9	SW	0.7	SW	0.8	SE	0.3	ESE
02:00 - 03:00	0.8	SW	0.4	S	0.4	SE	0.3	E
03:00 - 04:00	0.8	S	0.8	SSE	0.6	ESE	0.2	E
04:00 - 05:00	0.7	SSW	0.8	S	0.8	SE	0.2	SW
05:00 - 06:00	0.5	SSE	0.8	SSE	0.5	SE	0.4	SE
06:00 - 07:00	0.9	SSW	0.7	SE	0.7	ENE	0.5	ESE
07:00 - 08:00	0.5	SSW	1.2	WNW	0.6	ESE	0.2	W
08:00 - 09:00	0.6	SW	0.6	SE	0.9	SE	0.5	W
09:00 - 10:00	0.7	SW	0.8	W	0.7	SE	0.5	WNW
10:00 - 11:00	0.7	SSW	0.7	SE	0.5	ESE	0.4	WNW

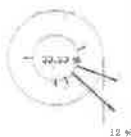
Wind Rose



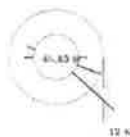
10 %



20 %



12 %



12 %



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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-Glow SPP2&3

Location : Wat Map Chalute

Monitor period : 11-18 Mar 2022

Wind Speed Model : NRG Symphonie

Serial No : A4904

Wind Direction Model : NRG Symphonie

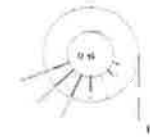
Serial No : A4904

Time	15-16 Mar 2022		16-17 Mar 2022		17-18 Mar 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
11:00 - 12:00	0.5	WSW	1.2	WSW	0.8	SSW
12:00 - 13:00	0.3	SW	0.9	SSW	0.8	SW
13:00 - 14:00	0.5	SSW	0.8	SSW	0.8	SW
14:00 - 15:00	0.9	SSW	0.7	SSW	0.8	SW
15:00 - 16:00	1.1	SSW	0.7	S	0.9	SW
16:00 - 17:00	1.4	WSW	0.6	S	0.5	SSW
17:00 - 18:00	1.4	WSW	0.6	SW	0.7	SSW
18:00 - 19:00	1.4	WSW	0.8	SW	0.8	SSW
19:00 - 20:00	1.2	WSW	0.9	SW	0.6	SSW
20:00 - 21:00	1.2	WSW	0.7	WSW	0.8	SSW
21:00 - 22:00	0.8	W	0.6	WSW	0.7	SW
22:00 - 23:00	0.6	W	0.6	ESE	1.1	WSW
23:00 - 24:00	0.5	W	0.7	SE	1.2	WSW
00:00 - 01:00	0.5	W	1.1	WSW	1.3	WSW
01:00 - 02:00	0.7	SW	1.1	SW	1.4	WSW
02:00 - 03:00	0.8	SSW	1.1	SSW	1.4	WSW
03:00 - 04:00	1.0	SSW	1.1	SSW	1.3	WSW
04:00 - 05:00	1.1	SSW	1.1	S	1.3	SW
05:00 - 06:00	1.0	SSW	1.1	SSE	1.2	SW
06:00 - 07:00	1.0	SSW	1.3	SSW	1.2	SW
07:00 - 08:00	1.2	WSW	1.4	SW	1.2	WSW
08:00 - 09:00	1.4	WSW	1.2	SW	1.2	WSW
09:00 - 10:00	1.2	WSW	1.4	WSW	1.1	W
10:00 - 11:00	1.3	W	1.1	WSW	0.9	WSW

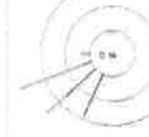
Wind Rose



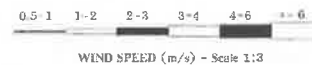
12 %



12 %



12 %



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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-Glow SPP2&3

Location : Ban Nong Feab

Monitor period : 11-18 Mar 2022

Wind Speed Model : NRG Symphonic

Serial No : A4901

Wind Direction Model : NRG Symphonic

Serial No : A4901

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	
N	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
E	0.0060	0.0179	0.0000	0.0000	0.0000	0.0000	0.0238
ESE	0.0179	0.0357	0.0000	0.0000	0.0000	0.0000	0.0536
SE	0.0179	0.0298	0.0000	0.0000	0.0000	0.0000	0.0476
SSE	0.0119	0.0238	0.0060	0.0000	0.0000	0.0000	0.0417
S	0.0298	0.0476	0.0000	0.0000	0.0000	0.0000	0.0774
SSW	0.0298	0.1310	0.0119	0.0000	0.0000	0.0000	0.1726
SW	0.0655	0.2083	0.0000	0.0000	0.0000	0.0000	0.2738
WSW	0.1012	0.0595	0.0000	0.0000	0.0000	0.0000	0.1607
W	0.0417	0.0060	0.0000	0.0000	0.0000	0.0000	0.0476
WNW	0.0119	0.0000	0.0000	0.0000	0.0000	0.0000	0.0119
NW	0.0060	0.0000	0.0000	0.0000	0.0000	0.0000	0.0060
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

CALM

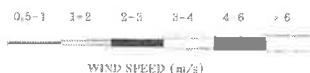
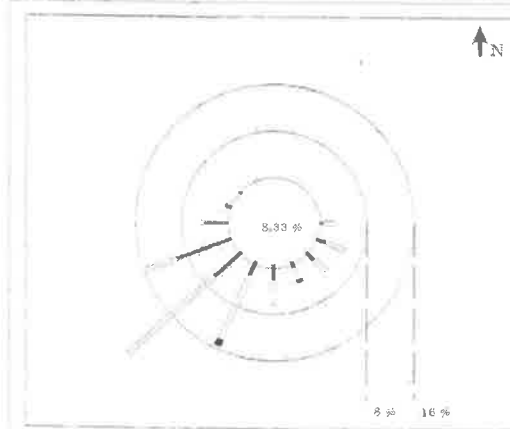
0.0833

Application : WindPro Ver.1.0

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

Data Unit : Direction in Deg.

Wind Speed in m/s

NOTE : Frequencies indicate direction from which
the wind is blowing

File Control : R:\Data\Wind\Windrose\Win-222031-Ban Nong Feab 11-18 Mar 2022

(Miss Katesarin Vorradetwittaya)
Environmental ScientistPreeda S.
(Miss Preeda Somjai)
Technical Management Team

Meteorological Monitoring Results : Wind Rose MTR-Glow SPP2&3

Location : Ban Nong Feab

Monitor period : 11-18 Mar 2022

Wind Speed Model : NRG Symphonic

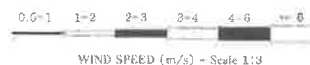
Serial No : A4901

Wind Direction Model : NRG Symphonic

Serial No : A4901

Time	11-12 Mar 2022		12-13 Mar 2022		13-14 Mar 2022		14-15 Mar 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
11:00 - 12:00	1.7	SSW	0.9	ESE	0.6	SE	1.3	S
12:00 - 13:00	2.1	SSW	1.1	ESE	1.2	E	1.5	SSW
13:00 - 14:00	2.0	SSW	1.6	SE	1.6	E	1.6	SSW
14:00 - 15:00	2.0	SSW	2.0	SSE	1.1	E	1.4	SW
15:00 - 16:00	1.8	SSW	1.9	SSE	1.0	W	1.5	SW
16:00 - 17:00	1.5	SW	1.2	SSE	0.9	WSW	1.3	SW
17:00 - 18:00	1.3	SSW	1.0	W	0.5	W	0.8	WSW
18:00 - 19:00	1.0	SSW	0.9	W	0.4	W	0.6	WSW
19:00 - 20:00	1.0	SSW	0.7	W	0.5	W	0.5	W
20:00 - 21:00	1.3	S	0.6	WSW	0.4	W	0.5	SW
21:00 - 22:00	1.5	SSW	0.9	E	0.7	NW	0.5	SW
22:00 - 23:00	1.8	SSW	1.2	ESE	0.9	SSW	0.5	SW
23:00 - 24:00	1.6	SSW	1.0	ESE	0.8	WSW	0.5	WSW
00:00 - 01:00	1.0	WSW	0.8	SE	0.7	SSE	0.9	WSW
01:00 - 02:00	1.1	SW	1.0	SE	0.7	ESE	0.8	W
02:00 - 03:00	1.2	SSW	1.1	SE	0.8	ESE	0.7	WSW
03:00 - 04:00	0.7	SW	1.1	ESE	0.7	W	0.8	SSE
04:00 - 05:00	0.7	S	1.0	ESE	0.9	WSW	1.0	S
05:00 - 06:00	0.4	WSW	1.1	SE	0.4	WSW	1.1	SW
06:00 - 07:00	0.1	SW	1.0	ESE	0.2	WSW	1.1	WSW
07:00 - 08:00	0.3	W	1.0	SE	0.3	WNW	1.1	S
08:00 - 09:00	0.4	W	1.0	SSE	0.5	WNW	1.1	WSW
09:00 - 10:00	1.3	SSE	1.0	S	1.0	SSW	1.1	SSW
10:00 - 11:00	1.2	SE	0.7	WNW	1.3	SSW	0.9	S

Wind Rose

(Miss Katesarin Vorradetwittaya)
Environmental ScientistPreeda S.
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-Glow SPP2&3

Location : Ban Nong Feab

Monitor period : 11-18 Mar 2022

Wind Speed Model : NRG Symphonic

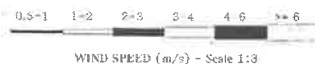
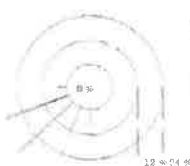
Serial No : A4901

Wind Direction Model : NRG Symphonic

Serial No : A4901

Time	15-16 Mar 2022		16-17 Mar 2022		17-18 Mar 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
11:00 - 12:00	1.1	SW	1.4	WSW	1.4	SSW
12:00 - 13:00	1.4	SSW	1.5	SW	1.5	S
13:00 - 14:00	1.2	SW	1.5	SW	1.4	SW
14:00 - 15:00	1.4	SSW	1.6	SW	1.4	SSW
15:00 - 16:00	1.3	SW	1.5	SW	1.3	SSW
16:00 - 17:00	1.2	SW	1.2	SW	1.3	SW
17:00 - 18:00	1.0	WSW	1.2	SW	0.9	SW
18:00 - 19:00	0.9	WSW	1.0	SW	0.8	SW
19:00 - 20:00	1.0	WSW	1.0	WSW	0.7	SW
20:00 - 21:00	1.2	WSW	1.0	SW	0.6	SW
21:00 - 22:00	1.4	SW	1.0	SW	0.4	SW
22:00 - 23:00	1.3	SW	0.9	SW	0.6	WSW
23:00 - 24:00	1.2	SW	0.9	SW	0.6	WSW
00:00 - 01:00	1.8	SW	1.0	SSW	1.2	SW
01:00 - 02:00	1.5	SSW	0.6	SSW	1.3	SW
02:00 - 03:00	1.2	S	0.7	SSW	1.4	SW
03:00 - 04:00	1.2	S	0.8	S	1.4	SW
04:00 - 05:00	1.3	WSW	0.9	S	1.5	SW
05:00 - 06:00	1.2	WSW	1.0	S	1.5	SW
06:00 - 07:00	0.9	WSW	1.0	SW	1.5	SW
07:00 - 08:00	0.7	WSW	0.6	WSW	1.4	SW
08:00 - 09:00	0.9	W	1.1	WSW	1.3	SW
09:00 - 10:00	1.1	SW	1.2	WSW	0.9	SW
10:00 - 11:00	1.2	SSW	1.3	SSW	1.0	SW

Wind Rose



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

File Control : R:\Database\Windrose\Wind-22031-Ban Nong Feab 11-18 Mar 2022

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

SPCOT CO., LTD.

239 Ratchadaphi Rd.
Bangkok, Bangkok 10600

Tel: 02-260-2600 Fax: 02-260-2600



Meteorological Monitoring Results : Wind Rose MTR-Glow SPP2&3

Location : Map Ta Phut New Town

Monitor period : 11-18 Mar 2022

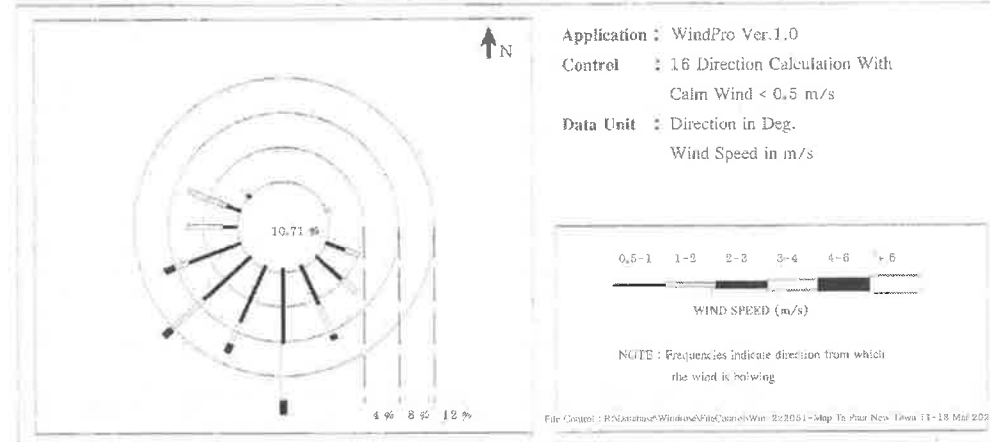
Wind Speed Model : NRG Symphonic

Serial No : A5084

Wind Direction Model : NRG Symphonic

Serial No : A5084

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	
N	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ENE	0.0000	0.0060	0.0000	0.0000	0.0000	0.0000	0.0060
E	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
ESE	0.0238	0.0179	0.0000	0.0000	0.0000	0.0000	0.0417
SE	0.0417	0.0238	0.0000	0.0000	0.0000	0.0000	0.0655
SSE	0.0536	0.0417	0.0060	0.0000	0.0000	0.0000	0.1012
S	0.0952	0.0714	0.0179	0.0000	0.0000	0.0000	0.1845
SSW	0.0774	0.0298	0.0119	0.0000	0.0000	0.0000	0.1190
SW	0.0774	0.0536	0.0119	0.0000	0.0000	0.0000	0.1429
WSW	0.0655	0.0179	0.0119	0.0000	0.0000	0.0000	0.0952
W	0.0179	0.0417	0.0000	0.0000	0.0000	0.0000	0.0595
WNW	0.0179	0.0476	0.0000	0.0000	0.0000	0.0000	0.0655
NW	0.0060	0.0060	0.0000	0.0000	0.0000	0.0000	0.0119
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.1071						



(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

SPCOT CO., LTD.

239 Ratchadaphi Rd.
Bangkok, Bangkok 10600

Tel: 02-260-2600 Fax: 02-260-2600



Meteorological Monitoring Results : Wind Rose MTR-Glow SPP2&3

Location : Map Ta Phut New Town

Monitor period : 11-18 Mar 2022

Wind Speed Model : NRG Symphonie

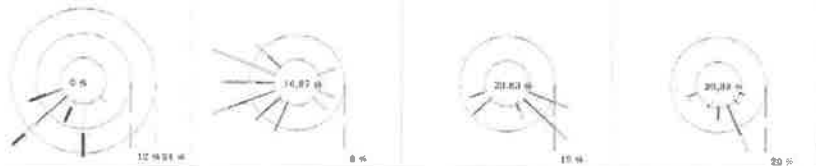
Serial No : A5084

Wind Direction Model : NRG Symphonie

Serial No : A5084

Time	11-12 Mar 2022		12-13 Mar 2022		13-14 Mar 2022		14-15 Mar 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
11:00 - 12:00	1.8	S	0.8	SW	0.7	SW	0.8	ESE
12:00 - 13:00	2.2	S	1.3	WSW	0.6	SW	0.8	SE
13:00 - 14:00	2.1	S	0.9	WSW	0.7	SW	1.2	SSE
14:00 - 15:00	2.2	SSW	0.7	W	0.9	WSW	1.3	SSE
15:00 - 16:00	2.3	SW	1.0	WNW	0.8	WSW	1.4	SSE
16:00 - 17:00	2.7	SSW	1.0	W	1.0	SSE	1.2	SSE
17:00 - 18:00	2.5	SW	1.2	WNW	1.5	SE	1.0	SSE
18:00 - 19:00	2.8	WSW	1.2	WNW	1.6	ESE	0.9	SSE
19:00 - 20:00	2.0	WSW	1.2	W	0.4	WSW	1.0	S
20:00 - 21:00	1.0	WSW	1.0	WNW	0.3	SW	0.7	SSE
21:00 - 22:00	0.7	WSW	1.5	SE	0.5	SW	0.5	SSE
22:00 - 23:00	0.5	SW	1.3	ESE	0.6	SSE	0.6	SSE
23:00 - 24:00	0.6	SW	0.4	SSW	0.5	SSE	0.5	SSE
00:00 - 01:00	0.7	SW	0.6	SSW	0.4	SE	0.7	S
01:00 - 02:00	0.6	SW	0.7	SSW	0.6	SE	0.2	SW
02:00 - 03:00	1.0	S	0.5	S	0.5	SE	0.4	E
03:00 - 04:00	1.1	SE	0.4	SSW	0.6	SE	0.2	E
04:00 - 05:00	1.9	S	0.8	SW	0.8	SE	0.2	SSE
05:00 - 06:00	2.1	S	0.4	WSW	0.6	SE	0.3	ESE
06:00 - 07:00	1.9	S	1.1	ENE	0.7	ESE	0.5	SSE
07:00 - 08:00	1.7	SSW	1.2	NW	0.8	ESE	0.8	S
08:00 - 09:00	1.8	SW	0.6	WSW	1.2	SE	0.9	SSW
09:00 - 10:00	1.8	SW	0.9	NW	1.0	ESE	0.8	WSW
10:00 - 11:00	1.0	SW	1.0	WSW	0.9	ESE	0.7	WSW

Wind Rose



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

File Control : R:\Database\Windrose\Win-Central\Win-222051-Map Ta Phut New Town 11-18 Mar 2022

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-Glow SPP2&3

Location : Map Ta Phut New Town

Monitor period : 11-18 Mar 2022

Wind Speed Model : NRG Symphonie

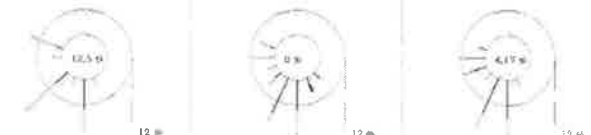
Serial No : A5084

Wind Direction Model : NRG Symphonie

Serial No : A5084

Time	15-16 Mar 2022		16-17 Mar 2022		17-18 Mar 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
11:00 - 12:00	0.6	S	1.1	WNW	1.0	W
12:00 - 13:00	0.7	S	1.0	WNW	0.9	WNW
13:00 - 14:00	1.2	S	1.4	S	1.4	SSE
14:00 - 15:00	1.5	S	1.9	SSW	1.8	S
15:00 - 16:00	1.2	SSW	2.1	SSE	1.6	S
16:00 - 17:00	1.3	SW	0.9	S	0.9	S
17:00 - 18:00	1.4	SW	0.7	SSW	1.0	S
18:00 - 19:00	1.4	SW	0.7	S	0.8	S
19:00 - 20:00	1.1	SW	0.7	S	0.6	S
20:00 - 21:00	1.1	SW	0.6	SSW	0.6	S
21:00 - 22:00	0.6	SW	0.7	SSW	0.5	S
22:00 - 23:00	0.4	SW	0.6	SE	0.9	SSW
23:00 - 24:00	0.5	SW	0.5	SSE	0.9	SSW
00:00 - 01:00	0.5	SW	0.8	SSW	1.1	SSW
01:00 - 02:00	0.5	S	0.8	SSW	1.1	WSW
02:00 - 03:00	0.4	S	0.7	S	1.1	W
03:00 - 04:00	1.0	S	1.0	SW	0.8	W
04:00 - 05:00	0.8	S	1.0	W	0.9	WSW
05:00 - 06:00	1.0	SSE	1.3	WSW	1.3	SW
06:00 - 07:00	1.3	W	1.5	W	1.0	SSW
07:00 - 08:00	1.3	WNW	1.4	W	1.0	SSW
08:00 - 09:00	1.5	WNW	1.2	S	1.1	SSW
09:00 - 10:00	1.1	WNW	1.1	S	0.9	WSW
10:00 - 11:00	0.9	WNW	1.0	SW	0.8	SSW

Wind Rose



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

File Control : R:\Database\Windrose\Win-Central\Win-222051-Map Ta Phut New Town 11-18 Mar 2022

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide MTR-Glow SPP2&3

Location : Map Ta Phut Health Center

Monitor Period : 11-18 Mar 2022

Analyzer Model : API 200A

Station No : 19

Serial No : 1645

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E

Serial No : 587

Calibration Gas Cylinder I.D.: EB0108319

Certified Date : 13 Jan 2022

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

Expire Date : 12 Jan 2023

Time	NO2 Concentration (ppb)						
	11-12 Mar 2022	12-13 Mar 2022	13-14 Mar 2022	14-15 Mar 2022	15-16 Mar 2022	16-17 Mar 2022	17-18 Mar 2022
10:00 - 11:00	8.7	7.1	18.6	9.3	23.2	12.5	8.1
11:00 - 12:00	7.4	8.6	18.5	11.0	17.4	13.6	6.8
12:00 - 13:00	5.5	20.6	18.4	10.6	24.4	14.4	12.0
13:00 - 14:00	4.5	14.7	24.3	11.6	20.7	10.9	9.3
14:00 - 15:00	4.9	11.8	12.0	24.3	17.2	8.4	14.4
15:00 - 16:00	7.9	10.0	14.8	18.1	12.0	8.0	25.8
16:00 - 17:00	12.6	13.0	18.6	17.1	25.4	8.9	23.8
17:00 - 18:00	12.3	18.7	18.7	15.6	11.4	9.7	14.6
18:00 - 19:00	11.6	22.3	16.5	16.9	7.1	10.6	9.8
19:00 - 20:00	12.3	26.3	20.0	16.8	10.3	8.6	16.9
20:00 - 21:00	6.6	19.3	16.5	16.1	10.4	7.8	12.5
21:00 - 22:00	3.6	13.6	14.6	17.8	8.0	7.0	7.0
22:00 - 23:00	4.9	11.3	13.3	18.7	6.4	4.5	10.0
23:00 - 00:00	9.0	8.2	12.7	17.5	7.0	6.4	10.0
00:00 - 01:00	5.4	5.3	10.6	18.5	5.3	6.4	11.6
01:00 - 02:00	3.7	4.7	9.1	14.9	4.2	6.5	6.3
02:00 - 03:00	4.1	6.3	11.9	9.6	6.7	3.5	6.1
03:00 - 04:00	5.3	7.2	13.4	8.2	4.9	2.4	5.7
04:00 - 05:00	4.5	8.4	14.1	8.5	7.3	5.5	6.3
05:00 - 06:00	8.6	9.3	14.4	11.5	6.8	9.9	12.2
06:00 - 07:00	13.0	11.0	16.3	14.6	7.7	9.7	13.2
07:00 - 08:00	6.6	11.7	14.0	17.3	15.4	11.7	13.1
08:00 - 09:00	4.5	15.9	17.1	15.5	20.4	8.0	16.3
09:00 - 10:00	11.6	19.3	11.8	11.9	14.2	5.4	14.2
Average-24Hr*	7.5	12.8	14.8	14.7	12.2	8.3	11.9
Max-1Hr	13.0	26.3	20.0	24.1	25.4	14.4	25.8
Min-1Hr	3.6	4.7	9.1	8.2	4.2	2.4	5.7
Standard-1Hr	170 ppb(320 ug/cu.m)						
Standard-24Hr							

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide MTR-Glow SPP2&3

Location : Wat Map Chalute

Monitor Period : 11-18 Mar 2022

Analyzer Model : API 200A

Station No : Mobile 18

Serial No : 2365

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E

Serial No : 587

Calibration Gas Cylinder I.D.: EB0108319

Certified Date : 13 Jan 2022

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

Expire Date : 12 Jan 2023

Time	NO2 Concentration (ppb)						
	11-12 Mar 2022	13-13 Mar 2022	13-14 Mar 2022	14-15 Mar 2022	15-16 Mar 2022	16-17 Mar 2022	17-18 Mar 2022
11:00 - 12:00	3.6	7.8	8.9	7.2	8.5	2.6	7.2
12:00 - 13:00	3.4	3.7	5.9	9.7	6.7	3.0	7.2
13:00 - 14:00	2.6	3.8	5.4	5.6	4.7	3.7	8.6
14:00 - 15:00	2.6	6.2	3.2	3.7	7.0	4.5	10.7
15:00 - 16:00	2.4	10.6	5.5	4.0	5.0	4.2	12.5
16:00 - 17:00	2.7	7.8	5.8	3.7	3.5	5.0	7.7
17:00 - 18:00	5.1	9.5	7.6	4.6	4.1	5.2	7.5
18:00 - 19:00	4.8	10.6	15.3	4.9	4.7	7.0	10.2
19:00 - 20:00	7.1	9.3	16.9	6.4	4.6	5.4	12.7
20:00 - 21:00	6.8	13.0	13.8	6.4	4.7	5.0	8.9
21:00 - 22:00	5.1	12.2	12.5	7.1	6.8	6.9	10.7
22:00 - 23:00	4.4	7.4	11.2	7.0	4.0	9.6	5.1
23:00 - 00:00	4.9	6.5	11.1	7.1	3.7	5.4	7.4
00:00 - 01:00	4.8	7.8	11.2	7.9	2.7	3.0	6.4
01:00 - 02:00	5.6	6.6	9.3	6.5	2.4	2.2	2.9
02:00 - 03:00	10.9	7.2	7.9	3.8	2.4	5.1	3.6
03:00 - 04:00	18.4	4.4	9.6	2.5	3.0	4.8	2.9
04:00 - 05:00	7.8	5.9	13.8	6.0	3.7	8.6	5.3
05:00 - 06:00	7.8	7.2	12.6	9.7	5.8	7.2	12.0
06:00 - 07:00	8.5	10.8	10.3	7.0	6.7	10.0	12.2
07:00 - 08:00	9.3	10.8	11.0	5.0	10.7	10.6	12.7
08:00 - 09:00	5.7	8.0	11.6	6.9	9.3	11.5	9.9
09:00 - 10:00	5.9	9.5	10.8	5.7	2.9	11.9	7.2
10:00 - 11:00	6.1	8.8	7.7	7.5	4.8	9.0	9.5
Average-24Hr*	6.0	8.2	10.0	6.1	5.2	6.3	8.3
Max-1Hr	18.4	13.0	16.9	9.7	10.7	11.9	12.7
Min-1Hr	2.4	3.7	3.2	2.5	2.4	2.2	2.9
Standard-1Hr	170 ppb(320 ug/cu.m)						
Standard-24Hr							

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide MTR-Glow SPP2&3

Location : Ban Nong Feab
Analyzer Model : API 200A
Serial No : 2384

Monitor Period : 11-18 Mar 2022
Station No : 17
Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E
Calibration Gas Cylinder I.D.: EB0108319
Certified Date : 13 Jan 2022
Expire Date : 12 Jan 2023

Serial No : 587
Cal Concentration (ppb) : 0,100,200,400

Time	NO2 Concentration (ppb)						
	11-12 Mar 2022	12-13 Mar 2022	13-14 Mar 2022	14-15 Mar 2022	15-16 Mar 2022	16-17 Mar 2022	17-18 Mar 2022
11:00 ~ 12:00	4.4	11.1	16.5	8.7	8.6	6.5	11.2
12:00 ~ 13:00	3.1	10.3	11.6	8.0	7.5	6.4	10.0
13:00 ~ 14:00	2.9	15.7	10.6	7.5	7.0	7.0	11.3
14:00 ~ 15:00	2.9	12.1	8.9	6.8	6.7	7.8	11.8
15:00 ~ 16:00	5.1	10.5	10.6	6.9	6.2	7.5	12.3
16:00 ~ 17:00	5.9	17.1	10.8	7.5	6.7	8.0	10.0
17:00 ~ 18:00	8.7	14.2	11.5	8.0	7.2	8.6	11.5
18:00 ~ 19:00	7.6	12.0	16.0	8.8	8.8	10.5	14.0
19:00 ~ 20:00	8.8	10.9	16.8	8.9	8.2	9.5	17.0
20:00 ~ 21:00	6.8	14.2	11.3	8.1	7.8	8.6	10.1
21:00 ~ 22:00	6.2	16.0	13.5	9.0	8.9	11.1	11.0
22:00 ~ 23:00	5.6	11.5	15.1	7.4	6.8	14.4	9.0
23:00 ~ 00:00	6.8	12.6	16.2	7.8	6.1	9.5	11.6
00:00 ~ 01:00	7.0	12.3	15.7	6.5	5.7	7.5	9.3
01:00 ~ 02:00	5.5	11.5	14.7	7.2	5.7	6.4	7.3
02:00 ~ 03:00	8.8	12.0	12.8	8.0	5.9	8.8	7.6
03:00 ~ 04:00	8.0	9.7	11.7	5.8	8.4	8.6	7.4
04:00 ~ 05:00	9.1	11.7	18.7	8.7	7.4	12.1	9.4
05:00 ~ 06:00	11.1	11.0	19.6	10.4	9.6	10.7	16.1
06:00 ~ 07:00	11.5	14.0	15.6	9.3	12.1	13.4	15.6
07:00 ~ 08:00	11.7	15.2	13.0	8.0	10.4	15.1	16.3
08:00 ~ 09:00	11.1	16.0	14.6	9.1	7.5	14.4	10.3
09:00 ~ 10:00	13.2	18.0	15.2	9.2	5.3	15.6	9.0
10:00 ~ 11:00	13.6	16.0	12.2	10.3	7.0	13.5	11.6
Average-24Hr	7.7	13.2	13.9	8.1	7.5	10.1	11.3
Max-1Hr	13.6	18.0	19.6	10.4	12.1	15.6	17.0
Min-1Hr	2.9	9.7	8.9	5.8	5.3	6.4	7.3
Standard-1Hr	170 ppb(320 ug/cu.m)						
Standard-24Hr	-						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide MTR-Glow SPP2&3

Location : Map Ta Phut New Town
Analyzer Model : API 200A
Serial No : 144

Monitor Period : 11-18 Mar 2022
Station No : 16
Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E
Calibration Gas Cylinder I.D.: EB0108319
Certified Date : 13 Jan 2022
Expire Date : 12 Jan 2023

Serial No : 587
Cal Concentration (ppb) : 0,100,200,400

Time	NO2 Concentration (ppb)						
	11-12 Mar 2022	12-13 Mar 2022	13-14 Mar 2022	14-15 Mar 2022	15-16 Mar 2022	16-17 Mar 2022	17-18 Mar 2022
11:00 ~ 12:00	8.6	7.8	8.6	11.0	7.1	2.9	7.7
12:00 ~ 13:00	8.5	6.5	7.4	8.0	5.9	4.6	8.8
13:00 ~ 14:00	2.8	9.0	8.0	5.8	4.7	4.2	10.2
14:00 ~ 15:00	10.9	12.3	6.3	4.6	5.8	13.2	25.1
15:00 ~ 16:00	10.7	11.6	8.3	8.1	3.4	11.0	20.1
16:00 ~ 17:00	5.8	14.1	9.5	4.7	4.4	6.5	8.3
17:00 ~ 18:00	8.8	10.5	14.5	6.2	4.9	7.1	9.1
18:00 ~ 19:00	7.9	9.3	21.7	8.2	5.8	9.0	12.0
19:00 ~ 20:00	9.2	14.6	21.7	10.2	5.3	7.4	17.3
20:00 ~ 21:00	7.2	17.6	16.5	10.1	5.5	6.4	10.7
21:00 ~ 22:00	5.7	11.3	13.5	8.8	6.5	8.8	12.0
22:00 ~ 23:00	5.0	10.0	11.0	11.0	4.9	12.3	9.5
23:00 ~ 00:00	6.0	9.9	11.9	11.3	4.4	7.3	13.0
00:00 ~ 01:00	8.3	10.8	11.1	11.3	3.7	4.8	11.6
01:00 ~ 02:00	7.5	10.0	12.8	9.3	3.5	4.0	9.3
02:00 ~ 03:00	18.1	10.2	13.5	6.1	3.7	6.2	9.8
03:00 ~ 04:00	10.6	7.8	13.3	5.8	4.2	5.9	9.1
04:00 ~ 05:00	11.4	9.5	16.9	10.9	5.3	10.4	9.6
05:00 ~ 06:00	11.6	12.0	18.1	12.9	10.7	10.4	15.4
06:00 ~ 07:00	21.9	14.0	17.0	10.9	18.4	19.8	21.0
07:00 ~ 08:00	13.3	13.2	15.0	12.6	14.4	14.5	13.9
08:00 ~ 09:00	10.2	11.8	11.3	6.8	9.2	13.3	8.4
09:00 ~ 10:00	9.8	12.3	14.8	7.8	4.0	14.2	9.2
10:00 ~ 11:00	10.9	12.5	13.2	9.4	6.5	10.3	10.1
Average-24Hr	9.2	11.2	13.1	8.7	6.3	8.9	12.1
Max-1Hr	21.9	17.6	21.7	12.9	18.4	19.8	25.1
Min-1Hr	2.8	6.6	6.3	4.6	3.4	2.9	7.7
Standard-1Hr	170 ppb(320 ug/cu.m)						
Standard-24Hr	-						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Sulfur dioxide MTR-Glow SPP2&3

Location : Map Ta Phut Health Center

Monitor Period : 11-18 Mar 2022

Analyzer Model : API 100A

Station No : 19

Serial No : 238

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E

Serial No : 587

Calibration Gas Cylinder I.D.: EBO108319

Certified Date : 13 Jan 2022

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

Expire Date : 12 Jan 2023

Time	SO2 Concentration (ppb)						
	11-12 Mar 2022	12-13 Mar 2022	13-14 Mar 2022	14-15 Mar 2022	15-16 Mar 2022	16-17 Mar 2022	17-18 Mar 2022
10:00 - 11:00	2.9	2.0	2.9	4.6	2.7	1.7	4.3
11:00 - 12:00	3.1	3.4	3.6	2.1	2.9	1.7	3.8
12:00 - 13:00	3.0	3.5	3.4	1.5	3.2	1.5	4.8
13:00 - 14:00	1.9	2.6	2.9	2.4	2.0	1.4	4.2
14:00 - 15:00	1.4	3.8	1.6	2.9	1.8	1.4	2.9
15:00 - 16:00	1.5	2.7	1.4	3.0	1.9	1.4	3.1
16:00 - 17:00	1.8	2.2	2.0	1.8	2.2	2.1	3.1
17:00 - 18:00	1.9	2.7	1.8	1.4	2.4	2.2	3.9
18:00 - 19:00	1.5	2.7	2.3	1.8	2.5	1.7	3.4
19:00 - 20:00	1.3	2.1	2.2	3.3	2.4	1.8	1.4
20:00 - 21:00	2.4	2.6	2.1	1.8	2.3	4.0	2.1
21:00 - 22:00	2.4	1.4	2.3	2.6	1.9	4.3	2.6
22:00 - 23:00	2.3	1.2	2.2	2.8	2.0	3.2	2.1
23:00 - 00:00	1.9	1.7	2.5	2.2	2.0	2.3	3.1
00:00 - 01:00	2.1	1.6	2.0	2.5	2.2	2.8	2.6
01:00 - 02:00	1.8	1.3	1.9	2.5	2.0	2.3	2.7
02:00 - 03:00	2.0	1.4	1.8	1.4	2.1	2.1	2.4
03:00 - 04:00	1.3	1.7	1.9	1.4	2.6	1.9	2.0
04:00 - 05:00	1.8	1.6	1.7	1.5	2.9	1.6	1.9
05:00 - 06:00	2.4	2.0	2.3	2.0	2.5	2.1	1.9
06:00 - 07:00	1.9	2.4	2.3	2.2	2.1	3.6	1.8
07:00 - 08:00	1.6	1.5	3.9	2.8	1.9	5.7	1.9
08:00 - 09:00	1.7	3.1	5.7	2.6	2.2	6.2	1.9
09:00 - 10:00	2.3	2.7	6.0	2.6	1.9	5.2	1.7
Average-24Hr*	2.6	2.2	2.6	2.3	2.3	2.7	2.7
Max-1Hr	3.1	3.8	6.0	4.8	3.9	8.2	4.8
Min-1Hr	1.3	1.2	1.4	1.4	1.8	1.4	1.4
Standard-1Hr	300 ppb(780 ug/cu.m)						
Standard-24Hr	120 ppb(300 ug/cu.m)						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Sulfur dioxide MTR-Glow SPP2&3

Location : Wat Map Chalute

Monitor Period : 11-18 Mar 2022

Analyzer Model : API 100A

Station No : Mobile 18

Serial No : 377

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E

Serial No : 587

Calibration Gas Cylinder I.D.: EBO108319

Certified Date : 13 Jan 2022

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

Expire Date : 12 Jan 2023

Time	SO2 Concentration (ppb)						
	11-12 Mar 2022	12-13 Mar 2022	13-14 Mar 2022	14-15 Mar 2022	15-16 Mar 2022	16-17 Mar 2022	17-18 Mar 2022
11:00 - 12:00	3.1	2.1	2.7	5.9	1.9	2.4	3.0
12:00 - 13:00	5.9	2.5	3.3	2.8	3.3	3.8	4.4
13:00 - 14:00	5.7	3.3	3.9	2.4	2.7	2.4	5.4
14:00 - 15:00	2.3	4.0	2.3	2.5	1.9	2.2	5.9
15:00 - 16:00	2.4	5.1	2.7	2.4	1.1	2.2	4.3
16:00 - 17:00	2.6	2.4	2.4	2.5	2.9	2.2	2.7
17:00 - 18:00	2.7	2.2	2.4	2.7	3.0	2.5	3.3
18:00 - 19:00	3.6	2.3	2.8	2.7	2.9	3.5	4.1
19:00 - 20:00	3.2	2.9	2.3	2.3	2.3	2.7	3.3
20:00 - 21:00	2.1	2.5	2.1	2.2	2.6	2.2	2.1
21:00 - 22:00	3.1	2.4	2.1	1.7	2.7	3.2	2.2
22:00 - 23:00	3.6	2.4	2.1	1.9	2.3	3.3	3.8
23:00 - 00:00	3.6	2.3	2.1	2.6	2.4	4.8	2.7
00:00 - 01:00	5.7	2.3	2.1	2.1	2.3	2.8	2.9
01:00 - 02:00	6.0	2.4	2.3	2.0	2.3	3.8	2.7
02:00 - 03:00	0.8	2.3	2.3	2.2	2.3	3.3	3.1
03:00 - 04:00	3.0	2.3	2.1	2.3	2.3	2.7	3.2
04:00 - 05:00	2.5	2.5	2.0	2.2	2.8	2.7	2.2
05:00 - 06:00	2.5	2.4	2.2	2.3	2.3	2.3	2.7
06:00 - 07:00	4.1	2.3	2.0	2.6	2.8	2.4	2.2
07:00 - 08:00	2.9	2.3	1.8	2.6	2.3	3.9	2.2
08:00 - 09:00	2.9	2.2	3.0	2.8	2.2	5.4	2.2
09:00 - 10:00	3.0	2.2	5.3	2.9	2.4	5.3	2.3
10:00 - 11:00	2.6	2.3	6.3	1.8	2.4	5.0	2.4
Average-24Hr*	3.3	2.6	2.7	2.5	2.5	3.2	3.1
Max-1Hr	6.0	5.1	6.3	5.9	3.3	5.4	5.9
Min-1Hr	0.6	2.1	1.8	1.7	1.1	2.2	2.1
Standard-1Hr	300 ppb(780 ug/cu.m)						
Standard-24Hr	120 ppb(300 ug/cu.m)						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Sulfur dioxide MTR-Glow SPP2&3

Location : Ban Nong Feab
Analyzer Model : Thermo 43C
Serial No : 60771-32812
Monitor Period : 11-18 Mar 2022
Station No : 17
Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E
Calibration Gas Cylinder I.D.: EB0108319
Certified Date : 13 Jan 2022
Expire Date : 12 Jan 2023
Serial No : 587
Cal Concentration (ppb) : 0,100,200,400

Time	SO2 Concentration (ppb)						
	11-12 Mar 2022	12-13 Mar 2022	13-14 Mar 2022	14-15 Mar 2022	15-16 Mar 2022	16-17 Mar 2022	17-18 Mar 2022
11:00 - 12:00	2.9	2.5	3.3	5.6	3.6	2.1	5.3
12:00 - 13:00	3.2	4.2	4.2	2.2	3.5	2.1	4.1
13:00 - 14:00	3.1	5.0	4.5	1.5	4.6	2.0	5.4
14:00 - 15:00	2.3	3.5	3.9	2.5	2.8	1.8	4.8
15:00 - 16:00	1.5	4.0	1.7	3.2	2.4	1.9	3.3
16:00 - 17:00	1.5	3.3	1.7	3.8	2.4	1.8	4.1
17:00 - 18:00	2.2	2.7	2.4	2.4	2.7	2.4	3.6
18:00 - 19:00	2.0	2.3	1.9	1.5	2.9	2.7	3.9
19:00 - 20:00	1.8	3.1	2.7	2.0	3.0	2.2	4.6
20:00 - 21:00	1.3	2.9	2.6	4.1	3.0	2.1	1.9
21:00 - 22:00	2.6	2.3	2.5	2.0	2.9	3.5	2.4
22:00 - 23:00	3.4	1.4	2.2	3.1	2.3	5.0	3.2
23:00 - 00:00	2.7	1.2	2.0	3.5	2.3	3.9	2.7
00:00 - 01:00	1.9	1.7	2.7	2.6	2.5	2.5	2.6
01:00 - 02:00	1.9	1.9	1.8	3.3	2.9	3.2	3.2
02:00 - 03:00	1.6	1.5	1.8	3.3	2.5	2.8	3.3
03:00 - 04:00	2.1	1.6	1.7	1.6	2.4	2.5	3.1
04:00 - 05:00	1.3	1.9	1.9	1.5	3.2	2.3	2.6
05:00 - 06:00	1.5	1.8	1.8	1.4	3.6	2.0	2.3
06:00 - 07:00	2.6	2.4	2.6	2.1	3.3	2.1	2.3
07:00 - 08:00	2.2	3.0	2.5	2.4	2.8	3.5	2.1
08:00 - 09:00	1.7	1.8	3.6	3.3	3.2	5.6	2.4
09:00 - 10:00	2.0	4.0	6.1	2.9	2.7	6.7	2.3
10:00 - 11:00	3.0	3.2	6.0	3.0	2.4	5.6	2.0
Average-24Hr*	2.1	2.6	2.8	2.7	2.9	3.0	3.2
Max-1Hr	3.2	5.0	6.1	5.6	4.6	6.7	5.4
Min-1Hr	1.3	1.2	1.7	1.4	2.2	1.8	1.9
Standard-1Hr	300 ppb(780 ug/cu.m)						
Standard-24Hr	120 ppb(300 ug/cu.m)						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Sulfur dioxide MTR-Glow SPP2&3

Location : Map Ta Phut New Town
Analyzer Model : API 100A
Serial No : 069
Monitor Period : 11-18 Mar 2022
Station No : 16
Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E
Calibration Gas Cylinder I.D.: EB0108319
Certified Date : 13 Jan 2022
Expire Date : 12 Jan 2023
Serial No : 587
Cal Concentration (ppb) : 0,100,200,400

Time	SO2 Concentration (ppb)						
	11-12 Mar 2022	12-13 Mar 2022	13-14 Mar 2022	14-15 Mar 2022	15-16 Mar 2022	16-17 Mar 2022	17-18 Mar 2022
11:00 - 12:00	5.2	1.9	3.4	3.9	2.0	1.1	4.5
12:00 - 13:00	1.3	2.3	3.7	2.8	2.0	1.1	2.7
13:00 - 14:00	5.9	5.3	4.2	1.9	2.0	1.0	3.7
14:00 - 15:00	5.5	4.0	2.7	1.6	2.1	1.0	4.1
15:00 - 16:00	1.6	3.8	2.7	1.9	2.1	0.9	2.6
16:00 - 17:00	1.0	3.8	2.6	1.8	1.9	1.0	1.9
17:00 - 18:00	0.6	3.7	2.4	1.7	2.0	1.1	1.1
18:00 - 19:00	0.7	3.6	2.7	1.7	2.0	2.1	2.2
19:00 - 20:00	1.3	4.2	2.7	1.9	2.2	1.6	4.7
20:00 - 21:00	0.6	3.7	2.5	2.0	2.3	1.5	0.7
21:00 - 22:00	1.8	3.6	2.5	1.9	2.2	2.3	0.8
22:00 - 23:00	2.1	3.5	2.3	1.9	1.8	7.4	2.3
23:00 - 00:00	2.4	3.4	2.3	2.3	1.6	3.8	1.1
00:00 - 01:00	1.3	3.3	2.2	1.6	1.5	1.5	0.6
01:00 - 02:00	1.4	3.1	2.1	1.6	1.5	2.5	1.1
02:00 - 03:00	1.9	3.0	2.0	1.6	1.6	2.1	1.5
03:00 - 04:00	2.8	3.0	1.9	1.5	1.5	1.4	1.6
04:00 - 05:00	1.8	3.0	1.7	1.5	2.2	1.7	0.6
05:00 - 06:00	1.6	3.0	1.8	1.6	2.1	1.1	1.0
06:00 - 07:00	3.5	3.0	1.9	2.3	2.1	1.0	0.6
07:00 - 08:00	2.4	3.1	1.9	2.3	1.4	2.3	0.5
08:00 - 09:00	2.2	2.9	3.0	2.4	1.5	3.9	0.6
09:00 - 10:00	2.2	3.0	1.2	2.4	1.2	6.7	0.6
10:00 - 11:00	1.8	3.1	5.1	2.2	1.2	5.3	0.5
Average-24Hr*	2.2	3.3	2.6	2.0	1.8	2.3	1.7
Max-1Hr	5.9	5.3	5.1	3.9	2.3	7.4	4.7
Min-1Hr	0.6	1.9	1.2	1.5	1.2	0.9	0.5
Standard-1Hr	300 ppb(780 ug/cu.m)						
Standard-24Hr	120 ppb(300 ug/cu.m)						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. (Glow Phase 3) REFERENCE NO. : 222051AMBIENT/(Mar)/TSP
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 11-18/03/2022
RECEIVED DATE : 28/03/2022 ANALYTICAL DATE : 31/03/2022-01/04/2022
REPORT DATE : 05/04/2022 SAMPLE CONDITION : Good
SITE OPERATOR : Mr. Siwanon Kulawong
LOCATION DESCRIPTION : 1. Health Promotion Hospital of Map Ta Phut 3. Ban Nong Feab
2. Wat Map Chalude 4. Map Ta Phut New Town

PARAMETER	SAMPLING DATE	UNIT	RESULT				STANDARD*	REFERENCE METHOD
			1	2	3	4		
TSP (24 hr)	11-12/03/2022	mg/cu.m.	0.062	0.078	0.052	0.063	0.330	High Volume Air
	12-13/03/2022	mg/cu.m.	0.067	0.057	0.059	0.059		Sampler/Gravimetric
	13-14/03/2022	mg/cu.m.	0.070	0.068	0.067	0.066		Method
	14-15/03/2022	mg/cu.m.	0.047	0.054	0.058	0.046		
	15-16/03/2022	mg/cu.m.	0.044	0.038	0.034	0.025		
	16-17/03/2022	mg/cu.m.	0.055	0.043	0.050	0.045		
	17-18/03/2022	mg/cu.m.	0.058	0.060	0.051	0.041		

Phatchara Samanchan
(Miss Phatchara Samanchan)

Analyst

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

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

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



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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. (Glow Phase 3) REFERENCE NO. : 222051AMBIENT/(Feb)/PM-10
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 11-18/03/2022
RECEIVED DATE : 28/03/2022 ANALYTICAL DATE : 31/03/2022-01/04/2022
REPORT DATE : 05/04/2022 SAMPLE CONDITION : Good
SITE OPERATOR : Mr. Siwanon Kulawong
LOCATION DESCRIPTION : 1. Health Promotion Hospital of Map Ta Phut 3. Ban Nong Feab
2. Wat Map Chalude 4. Map Ta Phut New Town

PARAMETER	SAMPLING DATE	UNIT	RESULT				STANDARD*	REFERENCE METHOD
			1	2	3	4		
PM-10 (24 hr)	11-12/03/2022	mg/cu.m.	0.030	0.040	0.016	0.045	0.120	High Volume Air
	12-13/03/2022	mg/cu.m.	0.040	0.042	0.038	0.047		Sampler (Hi-Vol PM-10)
	13-14/03/2022	mg/cu.m.	0.042	0.043	0.044	0.045		Size Selective Inlet/
	14-15/03/2022	mg/cu.m.	0.016	0.026	0.040	0.030		Gravimetric Method
	15-16/03/2022	mg/cu.m.	0.022	0.023	0.026	0.019		
	16-17/03/2022	mg/cu.m.	0.025	0.023	0.034	0.034		
	17-18/03/2022	mg/cu.m.	0.026	0.029	0.036	0.031		

Phatchara Samanchan
(Miss Phatchara Samanchan)

Analyst

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co.,Ltd. (Glow Phase 3) REFERENCE NO. : 222051 (AMBIENT)/Feb/TSP(1)

SAMPLING BY : SECOT Co.,Ltd. SAMPLING DATE : 14-17/02/2022

RECEIVED DATE : 24/02/2022 ANALYTICAL DATE : 24-25/02/2022

REPORT DATE : 02/03/2022 SAMPLE CONDITION : Good

SITE OPERATOR : Mr. Siwanon Kulawong

PARAMETER	SAMPLING DATE	UNIT	RESULT	STANDARD ¹⁾	REFERENCE METHOD
			North of Coal Pile		
TSP (24 hr)	14-15/02/2022	mg/cu.m.	0.052	0.330	High Volume Air
	15-16/02/2022	mg/cu.m.	0.115		Sampler/Gravimetric
	16-17/02/2022	mg/cu.m.	0.080		Method

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

Naris Poowasametch

(Miss Narisa Poowasametch)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co.,Ltd. (Glow Phase 3) REFERENCE NO. : 222051 (AMBIENT)/Feb/TSP(2)

SAMPLING BY : SECOT Co.,Ltd. SAMPLING DATE : 14-17/02/2022

RECEIVED DATE : 24/02/2022 ANALYTICAL DATE : 24-25/02/2022

REPORT DATE : 02/03/2022 SAMPLE CONDITION : Good

SITE OPERATOR : Mr. Siwanon Kulawong

PARAMETER	SAMPLING DATE	UNIT	RESULT	STANDARD ¹⁾	REFERENCE METHOD
			South of Coal Pile		
TSP (24 hr)	14-15/02/2022	mg/cu.m.	0.077	0.330	High Volume Air
	15-16/02/2022	mg/cu.m.	0.098		Sampler/Gravimetric
	16-17/02/2022	mg/cu.m.	0.077		Method

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

Naris Poowasametch

(Miss Narisa Poowasametch)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co.,Ltd. (Glow Phase 3) REFERENCE NO. : 222051(AMBIENT)/May/TSP(1)
SAMPLING BY : SECOT Co.,Ltd. SAMPLING DATE : 17-20/05/2022
RECEIVED DATE : 31/05/2022 ANALYTICAL DATE : 03-04/06/2022
REPORT DATE : 07/06/2022 SAMPLE CONDITION : Good
SITE OPERATOR : Mr. Siwanon Kulawong

PARAMETER	SAMPLING DATE	UNIT	RESULT	STANDARD ^{1/}	REFERENCE METHOD
			North of Coal Pile		
TSP (24 hr)	17-18/05/2022	mg/cu.m.	0.098	0.330	High Volume Air
	18-19/05/2022	mg/cu.m.	0.041		Sampler/Gravimetric
	19-20/05/2022	mg/cu.m.	0.050		Method

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co.,Ltd. (Glow Phase 3) REFERENCE NO. : 222051(AMBIENT)/May/TSP(2)
SAMPLING BY : SECOT Co.,Ltd. SAMPLING DATE : 17-20/05/2022
RECEIVED DATE : 31/05/2022 ANALYTICAL DATE : 03-04/06/2022
REPORT DATE : 07/06/2022 SAMPLE CONDITION : Good
SITE OPERATOR : Mr. Siwanon Kulawong

PARAMETER	SAMPLING DATE	UNIT	RESULT	STANDARD ^{1/}	REFERENCE METHOD
			South of Coal Pile		
TSP (24 hr)	17-18/05/2022	mg/cu.m.	0.095	0.330	High Volume Air
	18-19/05/2022	mg/cu.m.	0.025		Sampler/Gravimetric
	19-20/05/2022	mg/cu.m.	0.033		Method

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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คุณภาพอากาศจากปล่องระบายอากาศ



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SECOT CO., LTD.

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REFERENCE NO.	: 222051-Stack_PM/Cogen HRSG 1
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 13/03/2022
RECEIVED DATE	: 19/03/2022	ANALYTICAL DATE	: 19-21/03/2022
REPORT DATE	: 22/03/2022	SAMPLE CONDITION	: Good
STACK LOCATION	: Cogen HRSG 1	SITE OPERATOR	: Mr. Sittichai Sawangwongchai
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Natural Gas

STACK DESCRIPTION

Height	: 35.0	m	Gas Velocity	: 27.7	m/s
Diameter	: 3.06	m	Flow rate*	: 6,423	Ncu.m./min
Temperature	: 212.3	°C	Excess Oxygen	: 14.9	%
Moisture	: 13.4	%			

PARAMETER	UNIT	RESULT*		STANDARD	REFERENCE
		14.9%O ₂	7%O ₂	7%O ₂	
Particulate matter	mg/Ncu.m.	0.97	2.22	60 ^{1/2} (5 ²⁰)	US EPA Method 5

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG.NO. J-239-A-8183

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO. J-239-A-6419

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

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

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

4. ^{1/2} Notification of Ministry of Industry B.E.2547 (2004).

5. ^{2/} The value was assigned in EIA report.

The Monitoring Result of Emission Concentration COGEN HRSG 1 GLOW SPP 3 Co., Ltd. March 13, 2022

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O ₂	Corrected Gas Conc @7% O ₂
1	14.83	14.81	30.73	30.71	70.09
2	14.89	14.87	28.81	28.79	66.37
3	14.88	14.86	27.87	27.85	64.09
Average	14.87	14.85	29.13	29.12	66.86

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O ₂	Corrected Gas Conc @7% O ₂
1	14.83	14.81	0.12	0.05	0.11
2	14.89	14.87	0.12	0.06	0.14
3	14.88	14.86	0.12	0.07	0.16
Average	14.87	14.85	0.12	0.06	0.14

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: March 13, 2022 Run #: 1
 Start time: 11:00 AM Location: COGEN HRSG 1
 O₂ instrument Model: AMI 70 Finish time: 11:20 AM
 NO_x instrument Model: TELEDYNE 200 EM Serial No.: 111117-2
 SO₂ instrument Model: API 100 AH Serial No.: 345
 Fuel Type: Natural Gas Serial No.: 060
 Test Operator: Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:00 AM	14.87	32.89	0.12
11:01 AM	14.86	32.57	0.12
11:02 AM	14.86	32.47	0.12
11:03 AM	14.84	32.53	0.12
11:04 AM	14.84	32.34	0.12
11:05 AM	14.83	31.85	0.12
11:06 AM	14.88	31.43	0.12
11:07 AM	14.89	31.17	0.12
11:08 AM	14.86	31.13	0.11
11:09 AM	14.82	31.09	0.11
11:10 AM	14.86	30.80	0.12
11:11 AM	14.82	30.37	0.12
11:12 AM	14.86	29.98	0.12
11:13 AM	14.84	29.76	0.12
11:14 AM	14.82	29.39	0.12
11:15 AM	14.82	28.93	0.12
11:16 AM	14.78	28.54	0.12
11:17 AM	14.71	28.79	0.12
11:18 AM	14.76	29.17	0.12
11:19 AM	14.76	30.25	0.12
11:20 AM	14.81	29.87	0.12
Average	14.83	30.73	0.12

Signature



(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: March 13, 2022 Run #: 2
 Start time: 11:21 AM Location: COGEN HRSG 1
 O₂ instrument Model: AMI 70 Finish time: 11:41 AM
 NO_x instrument Model: TELEDYNE 200 EM Serial No.: 111117-2
 SO₂ instrument Model: API 100 AH Serial No.: 345
 Fuel Type: Natural Gas Serial No.: 060
 Test Operator: Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:21 AM	14.87	29.81	0.12
11:22 AM	14.88	29.52	0.12
11:23 AM	14.87	29.28	0.13
11:24 AM	14.88	29.34	0.13
11:25 AM	14.91	29.25	0.12
11:26 AM	14.90	29.02	0.12
11:27 AM	14.90	28.90	0.12
11:28 AM	14.85	29.04	0.12
11:29 AM	14.88	29.23	0.12
11:30 AM	14.90	28.91	0.12
11:31 AM	14.89	28.48	0.11
11:32 AM	14.88	28.54	0.12
11:33 AM	14.91	28.71	0.12
11:34 AM	14.90	28.71	0.12
11:35 AM	14.92	28.59	0.12
11:36 AM	14.89	28.34	0.12
11:37 AM	14.88	28.14	0.12
11:38 AM	14.87	28.22	0.12
11:39 AM	14.90	28.38	0.12
11:40 AM	14.90	28.22	0.12
11:41 AM	14.86	28.28	0.12
Average	14.89	28.81	0.12

Signature



(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: March 13, 2022
Start time: 11:42 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: TELEDYNE 200 EM
SO₂ instrument Model: API 100 AH
Fuel Type: Natural Gas

Run #: 3
Location: COGEN HRSG 1
Finish time: 12:02 PM
Serial No.: 111117-2
Serial No.: 345
Serial No.: 060
Test Operator: Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:42 AM	14.87	28.58	0.12
11:43 AM	14.86	28.64	0.11
11:44 AM	14.93	28.38	0.12
11:45 AM	14.88	28.20	0.12
11:46 AM	14.91	28.01	0.12
11:47 AM	14.92	27.67	0.12
11:48 AM	14.89	27.58	0.13
11:49 AM	14.87	27.72	0.12
11:50 AM	14.90	27.56	0.12
11:51 AM	14.85	27.65	0.12
11:52 AM	14.86	28.05	0.12
11:53 AM	14.90	27.94	0.11
11:54 AM	14.85	27.60	0.12
11:55 AM	14.86	27.67	0.12
11:56 AM	14.87	27.66	0.12
11:57 AM	14.87	27.63	0.12
11:58 AM	14.90	27.89	0.12
11:59 AM	14.88	27.76	0.12
12:00 PM	14.86	27.55	0.13
12:01 PM	14.89	27.57	0.12
12:02 PM	14.87	27.86	0.12
Average	14.88	27.87	0.12

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME: Glow SPP 3 Co., Ltd. **REFERENCE NO.:** 222051-Stack_PM/Cogen HRSG 2
SAMPLING BY: SECOT Co., Ltd. **SAMPLING DATE:** 08/06/2022
RECEIVED DATE: 09/06/2022 **ANALYTICAL DATE:** 09-10/06/2022
REPORT DATE: 14/06/2022 **SAMPLE CONDITION:** Good
STACK LOCATION: Cogen HRSG 2 **SITE OPERATOR:** Mr. Thatsana Haphonram
SOURCE DESCRIPTION: Combustion **FUEL TYPE:** Natural Gas

STACK DESCRIPTION

Height: 35.0 m **Gas Velocity:** 22.6 m/s
Diameter: 3.06 m **Flow rate*:** 5,367 Ncu.m./min
Temperature: 210.4 °C **Excess Oxygen:** 14.7 %
Moisture: 12.3 %

PARAMETER	UNIT	RESULT*		STANDARD	REFERENCE
		14.7%O ₂	7%O ₂	7%O ₂	METHOD
Particulate matter	mg/Ncu.m.	1.84	4.15	60 ¹⁾ (5 ²⁾)	US EPA Method 5

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG.NO. 2-239-ก-8183

Naiva Poowanapetch

(Miss Narisa Poowanapetch)

Technical Management Team

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

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

4. ¹⁾ Notification of Ministry of Industry B.E.2547 (2004).

5. ²⁾ The value was assigned in EIA report.

**The Monitoring Result of Emission Concentration
COGEN HRSG 2
GLOW SPP 3 Co., Ltd.
June 8, 2022**

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	14.67	14.71	40.17	40.17	90.20
2	14.75	14.78	37.92	37.92	86.13
3	14.71	14.73	42.49	42.49	95.72
Average	14.71	14.74	40.19	40.19	90.70

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	14.67	14.71	0.32	0.29	0.65
2	14.75	14.78	0.31	0.28	0.64
3	14.71	14.73	0.30	0.26	0.59
Average	14.71	14.74	0.31	0.28	0.62

**GLOW SPP 3 Co., Ltd.
EMISSION TEST RESULT**

Date: June 8, 2022
 Start time: 10:55 AM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EH
 SO₂ instrument Model: API 100 AH
 Fuel Type : Natural Gas

Run #: 1
 Location : COGEN HRSG 2
 Finish time : 11:15 AM
 Serial No.: 111117-2
 Serial No.: 435
 Serial No.: 058
 Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
10:55 AM	14.42	48.47	0.33
10:56 AM	14.42	47.11	0.33
10:57 AM	14.42	46.44	0.32
10:58 AM	14.42	46.16	0.32
10:59 AM	14.42	46.18	0.32
11:00 AM	14.43	46.19	0.30
11:01 AM	14.47	46.12	0.30
11:02 AM	14.51	45.86	0.30
11:03 AM	14.52	45.73	0.31
11:04 AM	14.52	45.91	0.31
11:05 AM	14.52	46.00	0.33
11:06 AM	14.52	45.81	0.33
11:07 AM	14.73	41.68	0.33
11:08 AM	14.97	30.02	0.33
11:09 AM	14.93	32.06	0.32
11:10 AM	14.98	31.01	0.32
11:11 AM	14.96	31.16	0.31
11:12 AM	14.98	30.94	0.30
11:13 AM	14.93	30.40	0.32
11:14 AM	14.96	30.28	0.31
11:15 AM	14.97	29.96	0.31
Average	14.67	40.17	0.32

Signature



(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: June 8, 2022
 Start time: 11:16 AM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EH
 SO₂ instrument Model: API 100 AH
 Fuel Type: Natural Gas

Run #: 2
 Location: COGEN HRSG 2
 Finish time: 11:36 AM
 Serial No.: 111117-2
 Serial No.: 435
 Serial No.: 058
 Test Operator: Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:16 AM	14.92	29.92	0.31
11:17 AM	14.97	29.31	0.31
11:18 AM	14.96	27.65	0.31
11:19 AM	14.92	28.63	0.33
11:20 AM	14.95	28.46	0.32
11:21 AM	14.89	28.15	0.32
11:22 AM	14.54	34.09	0.32
11:23 AM	14.62	40.99	0.31
11:24 AM	14.68	41.95	0.31
11:25 AM	14.69	41.88	0.32
11:26 AM	14.65	41.86	0.32
11:27 AM	14.69	42.14	0.30
11:28 AM	14.71	42.38	0.31
11:29 AM	14.70	42.26	0.32
11:30 AM	14.70	42.38	0.30
11:31 AM	14.69	42.50	0.30
11:32 AM	14.69	42.45	0.33
11:33 AM	14.71	42.63	0.33
11:34 AM	14.68	42.59	0.31
11:35 AM	14.71	42.24	0.29
11:36 AM	14.68	41.96	0.30
Average	14.75	37.92	0.31

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: June 8, 2022
 Start time: 11:37 AM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EH
 SO₂ instrument Model: API 100 AH
 Fuel Type: Natural Gas

Run #: 3
 Location: COGEN HRSG 2
 Finish time: 11:57 AM
 Serial No.: 111117-2
 Serial No.: 435
 Serial No.: 058
 Test Operator: Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:37 AM	14.70	41.81	0.30
11:38 AM	14.69	41.68	0.29
11:39 AM	14.69	41.63	0.29
11:40 AM	14.69	41.72	0.28
11:41 AM	14.71	41.96	0.29
11:42 AM	14.70	42.11	0.29
11:43 AM	14.69	41.81	0.28
11:44 AM	14.70	41.78	0.30
11:45 AM	14.70	41.88	0.31
11:46 AM	14.71	41.72	0.32
11:47 AM	14.69	41.45	0.31
11:48 AM	14.72	41.74	0.31
11:49 AM	14.70	42.07	0.32
11:50 AM	14.71	42.08	0.33
11:51 AM	14.71	42.06	0.30
11:52 AM	14.72	42.20	0.32
11:53 AM	14.73	43.34	0.31
11:54 AM	14.74	44.58	0.30
11:55 AM	14.73	45.09	0.31
11:56 AM	14.72	44.86	0.32
11:57 AM	14.73	44.79	0.32
Average	14.71	42.49	0.30

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist



บริษัท ซีคอต จำกัด

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REFERENCE NO.	: 222051-Stack_PM/CTG HRU 1A
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 15/03/2022
RECEIVED DATE	: 19/03/2022	ANALYTICAL DATE	: 19-21/03/2022
REPORT DATE	: 22/03/2022	SAMPLE CONDITION	: Good
STACK LOCATION	: CTG HRU 1A	SITE OPERATOR	: Mr. Natikred Dawjang
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Natural Gas

STACK DESCRIPTION

Height	: 60.0	m	Gas Velocity	: 23.5	m/s
Diameter	: 2.78	m	Flow rate*	: 5,630	Ncu.m/min
Temperature	: 136.3	°C	Excess Oxygen	: 13.9	%
Moisture	: 9.2	%			

PARAMETER	UNIT	RESULT*		STANDARD	REFERENCE
		13.9%O ₂	7%O ₂	7%O ₂	
				60 ^{1/2} (5 ^{2/3})	METHOD
Particulate matter	mg/Ncu.m.	0.75	1.51		US EPA Method 5

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG.NO.2-239-ก-8183

Naris Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.2-239-ก-6419

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

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

4. ^{1/2} Notification of Ministry of Industry B.E.2547 (2004).

5. ^{2/} The value was assigned in EIA report.

The Monitoring Result of Emission Concentration

CTG HRU 1A

GLOW SPP 3 Co., Ltd.

March 15, 2022

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O ₂	Corrected Gas Conc @7% O ₂
1	13.96	13.95	40.07	40.07	80.14
2	13.95	13.93	40.17	40.17	80.11
3	13.98	13.95	39.58	39.58	79.16
Average	13.96	13.94	39.94	39.94	79.80

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O ₂	Corrected Gas Conc @7% O ₂
1	13.96	13.95	0.49	0.44	0.88
2	13.95	13.93	0.34	0.30	0.60
3	13.98	13.95	0.34	0.30	0.60
Average	13.96	13.94	0.39	0.35	0.69

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: March 15, 2022
Start time: 3:30 PM
O₂ instrument Model: AMI 70
NO_x instrument Model: TELEDYNE 200 EM
SO₂ instrument Model: API 100 AH
Fuel Type : Natural Gas

Run # : 1
Location : CTG HRU 1A
Finish time : 3:50 PM
Serial No.: 111117-2
Serial No.: 435
Serial No.: 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
3:30 PM	13.95	40.27	0.56
3:31 PM	13.95	40.06	0.53
3:32 PM	13.94	40.09	0.56
3:33 PM	13.95	40.28	0.54
3:34 PM	13.94	40.32	0.55
3:35 PM	13.95	40.20	0.56
3:36 PM	14.01	39.75	0.53
3:37 PM	14.01	39.59	0.56
3:38 PM	13.94	40.09	0.56
3:39 PM	13.94	40.32	0.48
3:40 PM	13.95	39.86	0.45
3:41 PM	13.95	39.56	0.43
3:42 PM	13.94	39.84	0.47
3:43 PM	13.94	40.15	0.46
3:44 PM	13.95	39.90	0.48
3:45 PM	14.01	39.97	0.48
3:46 PM	13.94	40.35	0.48
3:47 PM	14.01	40.18	0.48
3:48 PM	13.94	40.04	0.37
3:49 PM	13.94	40.26	0.37
3:50 PM	13.94	40.44	0.37
Average	13.96	40.07	0.49

Signature



(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: March 15, 2022
Start time: 3:51 PM
O₂ instrument Model: AMI 70
NO_x instrument Model: TELEDYNE 200 EM
SO₂ instrument Model: API 100 AH
Fuel Type : Natural Gas

Run # : 2
Location : CTG HRU 1A
Finish time : 4:11 PM
Serial No.: 111117-2
Serial No.: 435
Serial No.: 060
Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
3:51 PM	13.94	40.38	0.34
3:52 PM	13.95	40.04	0.34
3:53 PM	13.95	39.97	0.34
3:54 PM	13.93	40.16	0.34
3:55 PM	13.93	40.20	0.34
3:56 PM	13.94	40.19	0.34
3:57 PM	13.95	39.91	0.33
3:58 PM	13.93	40.07	0.33
3:59 PM	13.95	40.17	0.34
4:00 PM	13.94	40.16	0.34
4:01 PM	13.94	40.40	0.34
4:02 PM	13.95	40.38	0.34
4:03 PM	13.95	40.22	0.32
4:04 PM	13.95	40.14	0.29
4:05 PM	13.95	40.17	0.32
4:06 PM	13.96	40.00	0.33
4:07 PM	13.95	40.16	0.32
4:08 PM	13.95	40.47	0.37
4:09 PM	13.96	40.26	0.36
4:10 PM	13.95	40.08	0.35
4:11 PM	13.95	40.10	0.36
Average	13.95	40.17	0.34

Signature



(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: March 15, 2022

Start time: 4:12 PM

O₂ instrument Model: AMI 70

NO_x instrument Model: TELEDYNE 200 EM

SO₂ instrument Model: API 100 AH

Fuel Type: Natural Gas

Run #: 3

Location: CTG HRU 1A

Finish time: 4:32 PM

Serial No.: 111117-2

Serial No.: 435

Serial No.: 060

Test Operator: Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
4:12 PM	13.97	39.88	0.34
4:13 PM	13.96	39.63	0.34
4:14 PM	14.02	39.55	0.33
4:15 PM	14.01	39.64	0.33
4:16 PM	14.01	40.00	0.33
4:17 PM	13.96	39.88	0.34
4:18 PM	13.95	39.86	0.34
4:19 PM	13.95	39.92	0.34
4:20 PM	13.96	39.41	0.34
4:21 PM	14.02	39.32	0.34
4:22 PM	14.02	39.42	0.34
4:23 PM	14.02	39.07	0.35
4:24 PM	14.02	39.16	0.35
4:25 PM	14.02	39.59	0.38
4:26 PM	14.02	39.61	0.35
4:27 PM	14.02	39.49	0.37
4:28 PM	13.95	39.43	0.35
4:29 PM	13.94	39.48	0.35
4:30 PM	13.93	39.62	0.33
4:31 PM	13.93	39.67	0.34
4:32 PM	13.95	39.48	0.34
Average	13.98	39.58	0.34

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REFERENCE NO.	: 222051-Stack_PM/CTG HRU 1B
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 15/03/2022
RECEIVED DATE	: 19/03/2022	ANALYTICAL DATE	: 19-21/03/2022
REPORT DATE	: 22/03/2022	SAMPLE CONDITION	: Good
STACK LOCATION	: CTG HRU 1B	SITE OPERATOR	: Mr. Nattkred Dawjang
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Natural Gas

STACK DESCRIPTION

Height	: 60.0	m	Gas Velocity	: 27.4	m/s
Diameter	: 2.78	m	Flow rate*	: 6,553	Ncu.m/min
Temperature	: 133.3	°C	Excess Oxygen	: 14.0	%
Moisture	: 10.1	%			

PARAMETER	UNIT	RESULT*		STANDARD	REFERENCE METHOD
		14.0%O ₂	7%O ₂	7%O ₂	
Particulate matter	mg/Ncu.m	2.21	4.47	60 ^{1/2} (5 ^{2/3})	US EPA Method 5

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG.NO. 2-239-B-8183

Narisa Poowanapetch

(Miss Narisa Poowanapetch)

Technical Management Team

REG.NO. 2-239-B-6419

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

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

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

4. ^{1/2} Notification of Ministry of Industry B.E.2547 (2004).

5. ^{2/3} The value was assigned in EIA report.

**The Monitoring Result of Emission Concentration
CTG HRU 1B
GLOW SPP 3 Co., Ltd.
March 15, 2022**

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	14.73	14.72	37.30	37.30	83.89
2	13.67	13.66	38.53	38.53	73.97
3	13.71	13.70	38.29	38.29	73.92
Average	14.04	14.03	38.04	38.04	76.93

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	14.73	14.72	0.39	0.33	0.74
2	13.67	13.66	0.37	0.32	0.61
3	13.71	13.70	0.39	0.34	0.66
Average	14.04	14.03	0.38	0.33	0.67

**GLOW SPP 3 Co., Ltd.
EMISSION TEST RESULT**

Date: March 15, 2022 Run #: 1
 Start time: 11:40 AM Location: CTG HRU 1B
 O₂ instrument Model: AMI 70 Finish time: 12:00 PM
 NO_x instrument Model: TELEDYNE 200 EM Serial No.: 111117-2
 SO₂ instrument Model: API 100 AH Serial No.: 435
 Fuel Type: Natural Gas Serial No.: 060
 Test Operator: Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:40 AM	14.75	36.44	0.38
11:41 AM	14.73	36.81	0.38
11:42 AM	14.74	37.10	0.38
11:43 AM	14.76	37.25	0.38
11:44 AM	14.75	37.33	0.37
11:45 AM	14.75	37.04	0.38
11:46 AM	14.75	37.01	0.38
11:47 AM	14.75	36.99	0.37
11:48 AM	14.73	36.99	0.38
11:49 AM	14.73	36.81	0.57
11:50 AM	14.73	36.75	0.38
11:51 AM	14.73	36.89	0.38
11:52 AM	14.73	36.94	0.38
11:53 AM	14.74	37.11	0.37
11:54 AM	14.73	37.07	0.38
11:55 AM	14.73	37.30	0.38
11:56 AM	14.71	38.17	0.38
11:57 AM	14.70	38.53	0.38
11:58 AM	14.71	38.15	0.38
11:59 AM	14.72	38.16	0.38
12:00 PM	14.71	38.50	0.37
Average	14.73	37.30	0.39

Signature



(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: March 15, 2022

Start time: 12:01 PM

O₂ instrument Model: AMI 70NO_x instrument Model: TELEDYNE 200 FMSO₂ instrument Model: API 100 AH

Fuel Type: Natural Gas

Run #: 2

Location: CTG HRU 1B

Finish time: 12:21 PM

Serial No.: 111117-2

Serial No.: 435

Serial No.: 060

Test Operator: Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
12:01 PM	13.70	38.73	0.37
12:02 PM	13.68	38.68	0.32
12:03 PM	13.68	38.44	0.31
12:04 PM	13.68	38.27	0.32
12:05 PM	13.67	38.20	0.32
12:06 PM	13.67	38.32	0.33
12:07 PM	13.66	38.26	0.33
12:08 PM	13.67	38.32	0.38
12:09 PM	13.67	38.35	0.38
12:10 PM	13.67	38.39	0.39
12:11 PM	13.68	38.41	0.41
12:12 PM	13.68	38.41	0.39
12:13 PM	13.67	38.44	0.39
12:14 PM	13.67	38.51	0.39
12:15 PM	13.68	38.55	0.39
12:16 PM	13.67	38.61	0.39
12:17 PM	13.67	38.94	0.39
12:18 PM	13.65	39.17	0.39
12:19 PM	13.65	39.03	0.41
12:20 PM	13.65	38.63	0.41
12:21 PM	13.66	38.40	0.39
Average	13.67	38.53	0.37

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: March 15, 2022

Start time: 12:22 PM

O₂ instrument Model: AMI 70NO_x instrument Model: TELEDYNE 200 FMSO₂ instrument Model: API 100 AH

Fuel Type: Natural Gas

Run #: 3

Location: CTG HRU 1B

Finish time: 12:42 PM

Serial No.: 111117-2

Serial No.: 435

Serial No.: 060

Test Operator: Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
12:22 PM	13.67	38.49	0.38
12:23 PM	13.68	38.50	0.39
12:24 PM	13.67	38.48	0.38
12:25 PM	13.68	38.49	0.37
12:26 PM	13.68	38.54	0.39
12:27 PM	13.68	38.64	0.39
12:28 PM	13.69	38.48	0.39
12:29 PM	13.68	38.39	0.39
12:30 PM	13.70	38.29	0.39
12:31 PM	13.68	38.43	0.41
12:32 PM	13.70	38.42	0.42
12:33 PM	13.70	38.15	0.42
12:34 PM	13.73	38.23	0.41
12:35 PM	13.75	38.23	0.42
12:36 PM	13.73	38.39	0.39
12:37 PM	13.75	38.41	0.39
12:38 PM	13.73	38.25	0.39
12:39 PM	13.76	37.76	0.39
12:40 PM	13.75	37.69	0.38
12:41 PM	13.75	37.99	0.39
12:42 PM	13.74	37.90	0.39
Average	13.71	38.29	0.39

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REFERENCE NO.	: 222051-Stack_PM/CTG HRU 2A
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 10/05/2022
RECEIVED DATE	: 13/05/2022	ANALYTICAL DATE	: 17-18/05/2022
REPORT DATE	: 25/05/2022	SAMPLE CONDITION	: Good
STACK LOCATION	: CTG HRU 2A	SITE OPERATOR	: Mr. Pisano Seenampong
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Natural Gas

STACK DESCRIPTION

Height	: 60.0	m	Gas Velocity	: 25.0	m/s
Diameter	: 2.78	m	Flow rate*	: 5,861	Ncu.m/min
Temperature	: 131.1	°C	Excess Oxygen	: 14.3	%
Moisture	: 11.9	%			

PARAMETER	UNIT	RESULT*		STANDARD	REFERENCE
		14.3%O ₂	7%O ₂	7%O ₂	METHOD
Particulate matter	mg/Ncu.m.	1.49	3.16	60 ^{1/2} (5 ^{2/2})	US EPA Method 5

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG.NO. 2-239-ก-8183

Narisa Poowasarnpetch

(Miss Narisa Poowasarnpetch)

Technical Management Team

REG.NO. 2-239-ก-6419

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

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

4. ^{1/2} Notification of Ministry of Industry B.E.2547 (2004).

5. ^{2/2} The value was assigned in RIA report.

The Monitoring Result of Emission Concentration

CTG HRU 2A

GLOW SPP 3 Co., Ltd.

May 10, 2022

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O ₂	Corrected Gas Conc @7% O ₂
1	14.30	14.30	34.01	34.15	71.92
2	14.34	14.33	33.36	33.46	70.79
3	14.40	14.38	33.33	33.40	71.21
Average	14.35	14.34	33.56	33.67	71.31

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O ₂	Corrected Gas Conc @7% O ₂
1	14.30	14.30	0.18	0.14	0.29
2	14.34	14.33	0.20	0.16	0.34
3	14.40	14.38	0.19	0.14	0.30
Average	14.35	14.34	0.19	0.15	0.31

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: May 10, 2022
 Start time: 1:50 PM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 SO₂ instrument Model: API 100 AH
 Fuel Type: Natural Gas

Run #: 1
 Location: CTG HRU 2A
 Finish time: 2:10 PM
 Serial No.: 121121-10
 Serial No.: 433
 Serial No.: 083
 Test Operator: Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
1:50 PM	14.30	34.16	0.03
1:51 PM	14.31	33.92	0.10
1:52 PM	14.30	34.09	0.17
1:53 PM	14.31	34.42	0.23
1:54 PM	14.32	34.53	0.26
1:55 PM	14.30	34.37	0.29
1:56 PM	14.29	34.59	0.36
1:57 PM	14.32	34.93	0.38
1:58 PM	14.29	34.73	0.33
1:59 PM	14.31	33.94	0.10
2:00 PM	14.30	33.60	0.02
2:01 PM	14.30	33.49	0.04
2:02 PM	14.31	33.57	0.03
2:03 PM	14.29	33.68	0.02
2:04 PM	14.33	33.38	0.01
2:05 PM	14.29	33.28	0.01
2:06 PM	14.31	33.44	0.07
2:07 PM	14.31	33.86	0.22
2:08 PM	14.29	34.19	0.34
2:09 PM	14.31	34.04	0.38
2:10 PM	14.29	33.94	0.39
Average	14.30	34.01	0.18

Signature



(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: May 10, 2022
 Start time: 2:11 PM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 SO₂ instrument Model: API 100 AH
 Fuel Type: Natural Gas

Run #: 2
 Location: CTG HRU 2A
 Finish time: 2:31 PM
 Serial No.: 121121-10
 Serial No.: 433
 Serial No.: 083
 Test Operator: Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
2:11 PM	14.28	33.98	0.41
2:12 PM	14.30	34.11	0.41
2:13 PM	14.29	34.11	0.40
2:14 PM	14.34	33.60	0.23
2:15 PM	14.31	33.74	0.06
2:16 PM	14.34	34.17	0.02
2:17 PM	14.34	33.88	0.01
2:18 PM	14.34	33.52	0.01
2:19 PM	14.34	33.54	0.01
2:20 PM	14.35	33.24	0.01
2:21 PM	14.34	33.18	0.08
2:22 PM	14.35	33.16	0.20
2:23 PM	14.35	33.02	0.28
2:24 PM	14.35	32.89	0.34
2:25 PM	14.35	32.74	0.38
2:26 PM	14.35	32.56	0.40
2:27 PM	14.35	31.95	0.41
2:28 PM	14.35	32.60	0.37
2:29 PM	14.36	33.63	0.16
2:30 PM	14.40	33.65	0.04
2:31 PM	14.41	33.22	0.03
Average	14.34	33.36	0.20

Signature



(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Run #: 3
 Date: May 10, 2022
 Start time: 2:32 PM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 SO₂ instrument Model: API 100 AH
 Fuel Type: Natural Gas

Location: CTG HRU 2A
 Finish time: 2:52 PM
 Serial No.: 121121-10
 Serial No.: 433
 Serial No.: 083
 Test Operator: Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
2:32 PM	14.41	32.68	0.02
2:33 PM	14.41	32.40	0.01
2:34 PM	14.37	32.36	0.02
2:35 PM	14.41	32.10	0.01
2:36 PM	14.36	32.22	0.02
2:37 PM	14.35	33.13	0.11
2:38 PM	14.38	33.39	0.29
2:39 PM	14.41	33.78	0.42
2:40 PM	14.39	33.74	0.44
2:41 PM	14.39	33.68	0.44
2:42 PM	14.36	33.35	0.43
2:43 PM	14.37	32.86	0.39
2:44 PM	14.41	32.69	0.22
2:45 PM	14.40	32.95	0.06
2:46 PM	14.45	33.42	0.05
2:47 PM	14.42	33.86	0.02
2:48 PM	14.41	34.01	0.11
2:49 PM	14.41	33.95	0.06
2:50 PM	14.41	33.96	0.11
2:51 PM	14.41	34.15	0.28
2:52 PM	14.38	35.23	0.43
Average	14.40	33.33	0.19

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist



บริษัท ซีคอต จำกัด

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REFERENCE NO. : 222051-Stack_PM/CTG HRU 2B
 SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 10/05/2022
 RECEIVED DATE : 13/05/2022 ANALYTICAL DATE : 17-18/05/2022
 REPORT DATE : 25/05/2022 SAMPLE CONDITION : Good
 STACK LOCATION : CTG HRU 2B SITE OPERATOR : Mr. Pisanu Seemampong
 SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 60.0 m Gas Velocity : 23.3 m/s
 Diameter : 2.78 m Flow rate* : 5,440 Nm³/min
 Temperature : 138.0 °C Excess Oxygen : 14.6 %
 Moisture : 10.9 %

PARAMETER	UNIT	RESULT*		STANDARD	REFERENCE
		14.6%O ₂	7%O ₂	7%O ₂	METHOD
Particulate matter	mg/Ncu.m.	2.15	4.73	60 ^{1/} (5 ^{2/})	US EPA Method 5

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG.NO. 2-239-9-8183

Narisa Poowasanprach

(Miss Narisa Poowasanprach)

Technical Management Team

REG.NO. 2-239-9-6419

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

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

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

4. ^{1/} Notification of Ministry of Industry B.E.2547 (2004).

5. ^{2/} The value was assigned in EIA report.

The Monitoring Result of Emission Concentration
CTG HRU 2B
GLOW SPP 3 Co., Ltd.
May 10, 2022

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	14.43	14.41	32.54	32.75	70.14
2	14.46	14.45	33.30	33.49	72.17
3	14.92	14.92	32.70	32.86	76.38
Average	14.60	14.59	32.85	33.03	72.81

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	14.43	14.41	0.34	0.32	0.69
2	14.46	14.45	0.43	0.40	0.86
3	14.92	14.92	0.44	0.40	0.93
Average	14.60	14.59	0.40	0.37	0.82

GLOW SPP 3 Co., Ltd.
EMISSION TEST RESULT

Date: May 10, 2022

Start time: 12:30 PM

O₂ instrument Model: AMI 70

NO_x instrument Model: TELEDYNE 200 EM

SO₂ instrument Model: API 100 AH

Fuel Type: Natural Gas

Run #: 1

Location: CTG HRU 2B

Finish time: 12:50 PM

Serial No.: 121121-10

Serial No.: 433

Serial No.: 083

Test Operator: Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
12:30 PM	14.38	32.59	0.70
12:31 PM	14.40	32.58	0.48
12:32 PM	14.37	32.57	0.06
12:33 PM	14.47	32.65	0.37
12:34 PM	14.41	32.58	0.41
12:35 PM	14.41	32.60	0.36
12:36 PM	14.47	32.57	0.12
12:37 PM	14.45	32.62	0.52
12:38 PM	14.43	32.69	0.27
12:39 PM	14.44	32.59	0.28
12:40 PM	14.40	32.44	0.32
12:41 PM	14.43	32.30	0.20
12:42 PM	14.39	32.46	0.89
12:43 PM	14.47	32.56	0.07
12:44 PM	14.39	32.60	0.22
12:45 PM	14.45	32.65	0.43
12:46 PM	14.45	32.49	0.11
12:47 PM	14.39	32.48	0.40
12:48 PM	14.48	32.49	0.30
12:49 PM	14.42	32.43	0.36
12:50 PM	14.47	32.32	0.34
Average	14.43	32.54	0.34

Signature

(Miss Katesarin Vorradeewittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: May 10, 2022
 Start time: 12:51 PM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 SO₂ instrument Model: API 100 AH
 Fuel Type: Natural Gas

Run #: 2
 Location: CTG HRU 2B
 Finish time: 1:11 PM
 Serial No.: 121121-10
 Serial No.: 433
 Serial No.: 083
 Test Operator: Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
12:51 PM	14.47	32.34	0.37
12:52 PM	14.52	32.43	0.90
12:53 PM	14.47	32.97	0.36
12:54 PM	14.53	33.31	0.48
12:55 PM	14.43	33.51	0.47
12:56 PM	14.40	33.84	0.44
12:57 PM	14.58	34.07	0.43
12:58 PM	14.47	34.21	0.44
12:59 PM	14.36	34.10	0.43
1:00 PM	14.44	34.52	0.39
1:01 PM	14.47	34.80	0.38
1:02 PM	14.45	34.15	0.41
1:03 PM	14.41	33.59	0.44
1:04 PM	14.47	33.32	0.44
1:05 PM	14.44	33.05	0.42
1:06 PM	14.45	32.93	0.39
1:07 PM	14.43	32.58	0.15
1:08 PM	14.49	32.41	0.58
1:09 PM	14.45	32.44	0.45
1:10 PM	14.41	32.43	0.53
1:11 PM	14.50	32.39	0.32
Average	14.46	33.30	0.43

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: May 10, 2022
 Start time: 1:12 PM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 SO₂ instrument Model: API 100 AH
 Fuel Type: Natural Gas

Run #: 3
 Location: CTG HRU 2B
 Finish time: 1:32 PM
 Serial No.: 121121-10
 Serial No.: 433
 Serial No.: 083
 Test Operator: Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
1:12 PM	14.48	32.28	0.82
1:13 PM	14.43	32.40	0.48
1:14 PM	14.74	32.62	0.18
1:15 PM	14.89	32.76	0.29
1:16 PM	15.08	33.00	0.35
1:17 PM	15.32	33.10	0.39
1:18 PM	15.35	33.08	0.40
1:19 PM	15.39	33.04	0.41
1:20 PM	15.41	32.98	0.42
1:21 PM	15.39	32.98	0.42
1:22 PM	15.54	33.06	0.44
1:23 PM	15.48	32.90	0.59
1:24 PM	15.44	32.78	0.52
1:25 PM	15.05	32.55	0.81
1:26 PM	14.53	32.44	1.00
1:27 PM	14.52	32.49	0.79
1:28 PM	14.42	32.37	0.15
1:29 PM	14.48	32.41	0.36
1:30 PM	14.47	32.40	0.19
1:31 PM	14.41	32.45	0.13
1:32 PM	14.51	32.56	0.05
Average	14.92	32.70	0.44

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REFERENCE NO.	: 222051-Stack_PM/CFB 1
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 18/03/2022
RECEIVED DATE	: 19/03/2022	ANALYTICAL DATE	: 19-23/03/2022
REPORT DATE	: 30/03/2022	SAMPLE CONDITION	: Good
STACK LOCATION	: CFB 1	SITE OPERATOR	: Mr. Kitupong Thakoengsuk
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Coal

STACK DESCRIPTION

Height	: 100.0	m	Gas Velocity	: 33.9	m/s
Diameter	: 2.82	m	Flow rate*	: 7,229	Ncu.m/min
Temperature	: 186.4	°C	Excess Oxygen	: 4.2	%
Moisture	: 11.4	%			

PARAMETER	UNIT	RESULT*		STANDARD	REFERENCE
		4.2%O ₂	7%O ₂	7%O ₂	METHOD
Particulate matter	mg/Ncu.m	29.50	24.58	120 ¹⁾ (55 ²⁾)	US EPA Method 5

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG.NO. 3-239-8-8183

Naisha Poowasanpetch

(Miss Naisha Poowasanpetch)

Technical Management Team

REG.NO. 3-239-8-6419

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

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

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

4. ¹⁾ Notification of Ministry of Industry B.E.2547 (2004).

5. ²⁾ The value was assigned in EIA report.

The Monitoring Result of Emission Concentration

CFB 1

GLOW SPP 3 Co., Ltd.

March 18, 2022

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O ₂	Corrected Gas Conc @7% O ₂
1	4.10	4.06	83.96	84.03	69.36
2	4.51	4.47	93.22	93.30	78.93
3	4.17	4.12	78.53	78.58	65.09
Average	4.26	4.22	85.24	85.30	71.07

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O ₂	Corrected Gas Conc @7% O ₂
1	4.10	4.06	164.40	164.52	135.80
2	4.51	4.47	50.57	50.58	42.79
3	4.17	4.12	94.65	94.70	78.45
Average	4.26	4.22	103.20	103.27	86.04

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: March 18, 2022
 Start time: 11:10 AM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 SO₂ instrument Model: API 100 AH
 Fuel Type: Coal

Run #: 1
 Location: CFB 1
 Finish time: 11:30 AM
 Serial No.: 111117-2
 Serial No.: 435
 Serial No.: 060
 Test Operator: Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:10 AM	4.34	82.51	59.27
11:11 AM	4.27	80.53	77.39
11:12 AM	4.29	81.04	91.34
11:13 AM	4.26	81.04	104.20
11:14 AM	4.15	80.87	114.49
11:15 AM	4.20	85.84	123.91
11:16 AM	4.01	74.81	151.95
11:17 AM	3.87	74.41	187.43
11:18 AM	3.91	77.36	194.44
11:19 AM	3.94	77.58	197.70
11:20 AM	3.80	76.54	217.82
11:21 AM	3.79	73.60	269.74
11:22 AM	3.79	74.29	276.77
11:23 AM	3.75	77.94	289.22
11:24 AM	3.98	90.55	243.20
11:25 AM	4.33	93.71	171.13
11:26 AM	4.18	91.54	172.95
11:27 AM	3.91	84.56	193.69
11:28 AM	4.49	107.47	118.92
11:29 AM	4.38	100.03	98.60
11:30 AM	4.36	96.93	98.17
Average	4.10	83.96	164.40

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: March 18, 2022
 Start time: 11:31 AM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 SO₂ instrument Model: API 100 AH
 Fuel Type: Coal

Run #: 2
 Location: CFB 1
 Finish time: 11:51 AM
 Serial No.: 111117-2
 Serial No.: 435
 Serial No.: 060
 Test Operator: Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:31 AM	4.43	95.05	92.03
11:32 AM	4.48	95.29	82.81
11:33 AM	4.57	100.34	68.68
11:34 AM	4.80	112.04	50.37
11:35 AM	4.92	108.41	37.36
11:36 AM	4.94	106.60	26.60
11:37 AM	4.85	103.33	22.09
11:38 AM	4.52	92.69	24.15
11:39 AM	4.54	93.19	31.21
11:40 AM	4.65	96.63	31.21
11:41 AM	4.40	86.47	31.50
11:42 AM	4.13	79.95	51.85
11:43 AM	4.37	89.28	57.59
11:44 AM	4.51	89.92	49.28
11:45 AM	4.35	89.39	53.19
11:46 AM	4.40	92.20	56.01
11:47 AM	4.41	88.15	56.52
11:48 AM	4.37	86.05	62.53
11:49 AM	4.39	84.41	59.09
11:50 AM	4.38	83.77	57.84
11:51 AM	4.28	84.49	59.97
Average	4.51	93.22	50.57

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd.

EMISSION TEST RESULT

Date: March 18, 2022
 Start time: 11:52 AM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 SO₂ instrument Model: API 100 AH
 Fuel Type: Coal

Run #: 3
 Location: CFB 1
 Finish time: 12:12 PM
 Serial No.: 111117-2
 Serial No.: 435
 Serial No.: 060
 Test Operator: Song HL

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:52 AM	4.33	83.40	60.75
11:53 AM	4.31	81.50	64.23
11:54 AM	4.40	89.12	63.96
11:55 AM	4.38	85.65	56.95
11:56 AM	4.28	80.11	57.86
11:57 AM	4.23	82.36	65.53
11:58 AM	4.27	82.33	71.99
11:59 AM	4.34	84.85	72.87
12:00 PM	4.27	78.77	73.77
12:01 PM	4.19	77.68	74.05
12:02 PM	4.04	74.16	102.91
12:03 PM	4.15	81.37	107.83
12:04 PM	4.21	79.97	95.17
12:05 PM	4.08	74.96	101.60
12:06 PM	4.09	76.60	110.12
12:07 PM	4.06	73.53	111.78
12:08 PM	4.04	73.27	142.55
12:09 PM	4.02	72.87	135.52
12:10 PM	3.96	71.68	136.43
12:11 PM	4.01	72.04	141.43
12:12 PM	3.97	72.68	140.27
Average	4.17	78.53	94.65

Signature

(Miss Katesario Vorradetwittaya)

Environmental Scientist



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EMISSION AIR QUALITY ANALYSIS REPORT

CLIENT NAME : Glow SPP 2&3 Co., Ltd. REQUEST SERVICE No. : 0576/65
 SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Sampling Bag
 SAMPLING DATE : 18/03/2022 ANALYTICAL DATE : 22/03/2022
 RECEIVED DATE : 19/03/2022 SAMPLE CONDITION : Normal
 REPORT DATE : 24/03/2022 FILE CODE : 222031_TO-15_March

Compound	Non Detection			SAMPLING LOCATION		
	ppmv	mg/m ³	mg/l	CFB-1	mg/m ³	mg/l
Acetaldehyde	0.10	0.18	0.00018	ND	ND	ND
1,3-butadiene	0.01	0.02	0.00002	ND	ND	ND
Acrolein	0.01	0.03	0.00003	ND	ND	ND
Acrylonitrile	0.01	0.02	0.00002	ND	ND	ND
Dichloromethane	0.02	0.07	0.00007	ND	ND	ND
Trichloromethane	0.02	0.10	0.00010	ND	ND	ND
1,2-dichloroethane	0.01	0.04	0.00004	ND	ND	ND
Benzene	0.01	0.03	0.00003	ND	ND	ND
Carbon tetrachloride	0.02	0.13	0.00013	ND	ND	ND
Trichloroethylene	0.02	0.11	0.00011	ND	ND	ND
1,2-dichloropropane	0.02	0.09	0.00009	ND	ND	ND
1,4-dioxane	0.05	0.18	0.00018	ND	ND	ND
Tetrachloroethylene	0.02	0.14	0.00014	ND	ND	ND
1,1,2,2-tetrachloroethane	0.05	0.35	0.00035	ND	ND	ND
Benzyl chloride	0.05	0.26	0.00026	ND	ND	ND
1,4-dichlorobenzene	0.02	0.12	0.00012	ND	ND	ND

Methods for the Determination of Toxic Organic Compounds in Ambient Air-2 : In house method based on EPA Methods 70-15, 1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Araya Tipparak

(Mrs. Araya Tipparak)

Technical Management Team

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

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REFERENCE NO.	: 222051-Stack_PM/CFB 2
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 11/05/2022
RECEIVED DATE	: 13/05/2022	ANALYTICAL DATE	: 13-20/05/2022
REPORT DATE	: 30/05/2022	SAMPLE CONDITION	: Good
STACK LOCATION	: CFB 2	SITE OPERATOR	: Mr. Pisanu Seenampeng
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Coal

STACK DESCRIPTION

Height	: 100.0	m	Gas Velocity	: 32.2	m/s
Diameter	: 2.82	m	Flow rate*	: 6,814	Ncu.m/min
Temperature	: 184.8	°C	Excess Oxygen	: 3.8	%
Moisture	: 12.5	%			

PARAMETER	UNIT	RESULT*		STANDARD	REFERENCE
		3.8%O ₂	7%O ₂	7%O ₂	METHOD
Particulate matter	mg/Ncu.m.	56.54	46.04	120 ¹⁾ (55 ²⁾)	US EPA Method 5

Phatchara Samanchan
(Miss Phatchara Samanchan)

Analyst

REG.NO.2-239-ก-8183

Narisa Poowasampetch
(Miss Narisa Poowasampetch)

Technical Management Team

REG.NO.2-239-ก-6419

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

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

4. ¹⁾ Notification of Ministry of Industry B.E.2547 (2004).

5. ²⁾ The value was assigned in EIA report.

The Monitoring Result of Emission Concentration CFB 2

GLOW SPP 3 Co., Ltd.
May 11, 2022

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O ₂	Corrected Gas Conc @7% O ₂
1	3.90	3.88	81.97	82.50	67.38
2	3.83	3.81	84.88	85.40	69.46
3	3.82	3.80	87.00	87.51	71.13
Average	3.85	3.83	84.62	85.14	69.33

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O ₂	Corrected Gas Conc @7% O ₂
1	3.90	3.88	167.47	167.64	136.91
2	3.83	3.81	172.18	172.45	140.26
3	3.82	3.80	180.72	181.10	147.21
Average	3.85	3.83	173.46	173.73	141.47

GLOW SPP 3 Co., Ltd.
EMISSION TEST RESULT

Date: May 11, 2022 Run #: 1
 Start time: 5:50 PM Location: CFB 2
 O₂ instrument Model: AMI 70 Finish time: 6:10 PM
 NO_x instrument Model: TELEDYNE 200 EM Serial No.: 121121-10
 SO₂ instrument Model: API 300 A Serial No.: 433
 Fuel Type: Coal Serial No.: 083
 Test Operator: Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
5:50 PM	3.94	82.31	164.29
5:51 PM	3.93	82.01	158.55
5:52 PM	3.91	81.36	163.67
5:53 PM	3.91	81.41	172.44
5:54 PM	3.88	80.93	172.33
5:55 PM	3.91	79.88	171.03
5:56 PM	3.95	80.57	160.37
5:57 PM	3.97	81.23	165.67
5:58 PM	3.90	80.14	164.37
5:59 PM	3.89	79.12	158.76
6:00 PM	3.89	78.39	170.13
6:01 PM	3.92	78.37	174.56
6:02 PM	3.86	81.13	167.99
6:03 PM	3.87	84.52	185.90
6:04 PM	3.87	84.81	173.66
6:05 PM	3.87	83.92	172.87
6:06 PM	3.82	83.56	171.55
6:07 PM	3.84	83.17	170.69
6:08 PM	3.92	83.61	164.95
6:09 PM	3.91	85.07	155.77
6:10 PM	3.90	85.81	157.26
Average	3.90	81.97	167.47

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd.
EMISSION TEST RESULT

Date: May 11, 2022 Run #: 2
 Start time: 6:11 PM Location: CFB 2
 O₂ instrument Model: AMI 70 Finish time: 6:31 PM
 NO_x instrument Model: TELEDYNE 200 EM Serial No.: 121121-10
 SO₂ instrument Model: API 300 A Serial No.: 433
 Fuel Type: Coal Serial No.: 083
 Test Operator: Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
6:11 PM	3.96	86.22	146.60
6:12 PM	4.00	87.71	148.03
6:13 PM	3.95	87.99	154.80
6:14 PM	3.91	86.79	156.17
6:15 PM	3.96	86.54	158.65
6:16 PM	3.89	86.43	167.35
6:17 PM	3.86	85.43	168.73
6:18 PM	3.76	81.36	168.02
6:19 PM	3.85	83.64	180.80
6:20 PM	3.90	87.39	171.56
6:21 PM	3.82	85.16	178.15
6:22 PM	3.77	84.77	178.42
6:23 PM	3.82	84.49	176.83
6:24 PM	3.77	83.90	179.90
6:25 PM	3.79	83.46	178.84
6:26 PM	3.77	83.39	171.54
6:27 PM	3.75	82.93	182.77
6:28 PM	3.70	82.74	189.22
6:29 PM	3.71	82.76	191.03
6:30 PM	3.77	83.67	189.22
6:31 PM	3.82	85.65	179.16
Average	3.83	84.88	172.18

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: May 11, 2022
 Start time: 6:32 PM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 BM
 SO₂ instrument Model: API 300 A
 Fuel Type: Coal

Run #: 3
 Location: CFB 2
 Finish time: 6:52 PM
 Serial No.: 121121-10
 Serial No.: 433
 Serial No.: 083
 Test Operator: Kittipong T.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
6:32 PM	3.80	87.52	182.61
6:33 PM	3.80	88.11	182.44
6:34 PM	3.79	88.62	176.48
6:35 PM	3.78	89.28	177.24
6:36 PM	3.78	89.24	189.67
6:37 PM	3.78	87.68	172.56
6:38 PM	3.72	85.48	185.25
6:39 PM	3.71	84.00	198.41
6:40 PM	3.79	84.04	187.73
6:41 PM	3.76	85.15	177.60
6:42 PM	3.77	84.65	189.66
6:43 PM	3.89	85.63	177.36
6:44 PM	3.83	86.26	177.26
6:45 PM	3.79	85.13	184.00
6:46 PM	3.87	85.90	171.20
6:47 PM	3.97	88.19	170.11
6:48 PM	3.88	88.62	181.26
6:49 PM	3.91	87.76	175.80
6:50 PM	3.82	87.77	183.00
6:51 PM	3.90	88.45	178.88
6:52 PM	3.93	89.61	176.54
Average	3.82	87.00	180.72

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist



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EMISSION AIR QUALITY ANALYSIS REPORT

CLIENT NAME : Glow SPP 2&3 Co., Ltd. REQUEST SERVICE No. : 1021/65
 SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Sampling Bag
 SAMPLING DATE : 11/05/2022 ANALYTICAL DATE : 26/05/2022
 RECEIVED DATE : 13/05/2022 SAMPLE CONDITION : Normal
 REPORT DATE : 31/05/2022 FILE CODE : 222051_TO-15_May

Compound	Non Detection			SAMPLING LOCATION		
				CFB-2		
	ppmv	mg/m ³	mg/l	ppmv	mg/m ³	mg/l
Acetaldehyde	0.10	0.18	0.00018	ND	ND	ND
1,3-butadiene	0.01	0.02	0.00002	ND	ND	ND
Acrolein	0.01	0.03	0.00003	ND	ND	ND
Acrylonitrile	0.01	0.02	0.00002	ND	ND	ND
Dichloromethane	0.02	0.07	0.00007	ND	ND	ND
Trichloromethane	0.02	0.10	0.00010	ND	ND	ND
1,2-dichloroethane	0.03	0.04	0.00004	ND	ND	ND
Benzene	0.01	0.03	0.00003	ND	ND	ND
Carbon tetrachloride	0.02	0.13	0.00013	ND	ND	ND
Trichloroethylene	0.02	0.11	0.00011	ND	ND	ND
1,2-dichloropropane	0.02	0.09	0.00009	ND	ND	ND
1,4-dioxane	0.05	0.18	0.00018	ND	ND	ND
Tetrachloroethylene	0.02	0.14	0.00014	ND	ND	ND
1,1,2,2-tetrachloroethane	0.05	0.35	0.00035	ND	ND	ND
Benzyl chloride	0.05	0.26	0.00026	ND	ND	ND
1,4-dichlorobenzene	0.02	0.12	0.00012	ND	ND	ND

Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd ed. In house method based on EPA Methods TO-15, 1999

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REFERENCE NO.	: 222051-Stack_PM/CFB 3
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 16/03/2022
RECEIVED DATE	: 19/03/2022	ANALYTICAL DATE	: 19-23/03/2022
REPORT DATE	: 30/03/2022	SAMPLE CONDITION	: Good
STACK LOCATION	: CFB 3	SITE OPERATOR	: Mr. Nattikred Dawjang
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Coal
STACK DESCRIPTION			

Height	: 100.0	m	Gas Velocity	: 30.9	m/s
Diameter	: 2.82	m	Flow rate*	: 7,255	Ncu.m/min
Temperature	: 149.2	°C	Excess Oxygen	: 3.7	%
Moisture	: 10.5	%			

PARAMETER	UNIT	RESULT*		STANDARD	REFERENCE METHOD
		3.7%O ₂	7%O ₂	7%O ₂	
Particulate matter	mg/Ncu.m.	26.89	21.73	120 ^{1/} (55 ^{2/})	US EPA Method 5

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG.NO. 2-239-8-8183

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO. 2-239-8-6419

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

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

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

4. ^{1/} Notification of Ministry of Industry B.E.2547 (2004).

5. ^{2/} The value was assigned in EIA report.

The Monitoring Result of Emission Concentration

CFB 3

GLOW SPP 3 Co., Ltd.

March 16, 2022

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O ₂	Corrected Gas Conc @7% O ₂
1	3.76	3.73	93.15	93.24	75.48
2	3.72	3.69	94.59	94.67	76.46
3	3.71	3.68	94.10	94.16	76.01
Average	3.73	3.70	93.95	94.02	75.98

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O ₂	Corrected Gas Conc @7% O ₂
1	3.76	3.73	151.18	151.33	122.51
2	3.72	3.69	151.72	151.85	122.64
3	3.71	3.68	152.87	152.98	123.49
Average	3.73	3.70	151.92	152.05	122.88

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: March 16, 2022
 Start time: 11:50 AM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 SO₂ instrument Model: API 100 AH
 Fuel Type: Coal

Run #: 1
 Location: CFB 3
 Finish time: 12:10 PM
 Serial No.: 111117-2
 Serial No.: 435
 Serial No.: 060
 Test Operator: Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:50 AM	3.71	93.28	148.90
11:51 AM	3.72	93.20	154.78
11:52 AM	3.78	93.28	149.07
11:53 AM	3.93	92.59	143.32
11:54 AM	3.78	92.71	144.28
11:55 AM	3.82	93.45	148.76
11:56 AM	3.87	93.68	146.85
11:57 AM	3.77	93.43	149.88
11:58 AM	3.79	93.07	146.26
11:59 AM	3.86	92.69	144.91
12:00 PM	3.79	92.11	144.96
12:01 PM	3.69	92.35	152.71
12:02 PM	3.75	92.72	152.32
12:03 PM	3.76	92.80	154.80
12:04 PM	3.69	92.81	161.26
12:05 PM	3.72	92.94	158.30
12:06 PM	3.73	93.39	155.64
12:07 PM	3.75	93.37	151.76
12:08 PM	3.67	93.37	157.09
12:09 PM	3.68	94.03	156.52
12:10 PM	3.80	94.86	152.50
Average	3.76	93.15	151.18

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: March 16, 2022
 Start time: 12:11 PM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 SO₂ instrument Model: API 100 AH
 Fuel Type: Coal

Run #: 2
 Location: CFB 3
 Finish time: 12:31 PM
 Serial No.: 111117-2
 Serial No.: 435
 Serial No.: 060
 Test Operator: Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
12:11 PM	3.78	95.02	152.70
12:12 PM	3.75	93.65	146.39
12:13 PM	3.72	91.90	149.26
12:14 PM	3.68	91.76	158.89
12:15 PM	3.65	93.72	155.06
12:16 PM	3.70	94.87	148.48
12:17 PM	3.73	95.83	147.93
12:18 PM	3.79	96.46	149.65
12:19 PM	3.69	96.07	155.73
12:20 PM	3.74	96.23	148.33
12:21 PM	3.75	96.72	147.05
12:22 PM	3.72	95.65	148.25
12:23 PM	3.76	94.78	151.08
12:24 PM	3.75	94.75	149.86
12:25 PM	3.74	94.77	153.54
12:26 PM	3.70	95.36	153.87
12:27 PM	3.71	94.79	155.54
12:28 PM	3.71	93.86	153.64
12:29 PM	3.68	93.23	149.47
12:30 PM	3.73	92.86	154.62
12:31 PM	3.69	94.14	156.71
Average	3.72	94.59	151.72

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: March 16, 2022

Start time: 12:32 PM

O₂ instrument Model: AMI 70

NO_x instrument Model: TELEDYNE 200 EM

SO₂ instrument Model: API 100 AH

Fuel Type: Coal

Run #: 3

Location: CFB 3

Finish time: 12:52 PM

Serial No.: 111117-2

Serial No.: 435

Serial No.: 060

Test Operator: Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
12:32 PM	3.67	94.93	156.29
12:33 PM	3.64	94.58	157.93
12:34 PM	3.64	94.09	160.92
12:35 PM	3.70	93.97	152.01
12:36 PM	3.75	93.81	141.85
12:37 PM	3.83	94.25	139.99
12:38 PM	3.76	95.26	146.24
12:39 PM	3.68	94.20	152.57
12:40 PM	3.64	92.53	157.82
12:41 PM	3.57	92.11	160.86
12:42 PM	3.60	92.45	163.63
12:43 PM	3.63	93.19	163.02
12:44 PM	3.65	92.45	154.85
12:45 PM	3.64	92.81	160.42
12:46 PM	3.70	93.84	159.07
12:47 PM	3.75	93.83	148.64
12:48 PM	3.78	94.62	147.15
12:49 PM	3.83	95.40	143.74
12:50 PM	3.85	95.12	144.61
12:51 PM	3.81	96.11	149.52
12:52 PM	3.71	96.55	149.15
Average	3.71	94.10	152.87

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist



บริษัท ซีคอต จำกัด
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800

239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND

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

EMISSION AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: Glow SPP 2&3 Co., Ltd.	REQUEST SERVICE No.	: 0555/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Sampling Bag
SAMPLING DATE	: 16/03/2022	ANALYTICAL DATE	: 22/03/2022
RECEIVED DATE	: 18/03/2022	SAMPLE CONDITION	: Normal
REPORT DATE	: 24/03/2022	FILE CODE	: 222051 TO-15_March

Compound	Non Detection			SAMPLING LOCATION		
	ppmv	mg/m ³	mg/l	CFB-3	mg/m ³	mg/l
Acetaldehyde	0.10	0.18	0.00018	ND	ND	ND
1,3-butadiene	0.01	0.02	0.00002	ND	ND	ND
Acrolein	0.01	0.03	0.00003	ND	ND	ND
Acrylonitrile	0.01	0.02	0.00002	ND	ND	ND
Dichloromethane	0.02	0.07	0.00007	ND	ND	ND
Trichloromethane	0.02	0.10	0.00010	ND	ND	ND
1,2-dichloroethane	0.01	0.04	0.00004	ND	ND	ND
Benzene	0.01	0.03	0.00003	ND	ND	ND
Carbon tetrachloride	0.02	0.13	0.00013	ND	ND	ND
Trichloroethylene	0.02	0.11	0.00011	ND	ND	ND
1,2-dichloropropane	0.02	0.09	0.00009	ND	ND	ND
1,4-dioxane	0.05	0.18	0.00018	ND	ND	ND
Tetrachloroethylene	0.02	0.14	0.00014	ND	ND	ND
1,1,2,2-tetrachloroethane	0.05	0.35	0.00035	ND	ND	ND
Benzyl chloride	0.05	0.26	0.00026	ND	ND	ND
1,4-dichlorobenzene	0.02	0.12	0.00012	ND	ND	ND

Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd ed. In house method based on EPA Methods TO-15, 1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

(Mrs. Araya Tippasuk)

Technical Management Team

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

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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	: Glow SPP 3 Co., Ltd.	REFERENCE NO.	: 222051-Stack_PM/Cogen HRSG 3A
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 14/03/2022
RECEIVED DATE	: 19/03/2022	ANALYTICAL DATE	: 19-21/03/2022
REPORT DATE	: 22/03/2022	SAMPLE CONDITION	: Good
STACK LOCATION	: Cogen HRSG 3A	SITE OPERATOR	: Mr. Pisanu Seonampeng
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Natural Gas

STACK DESCRIPTION

Height	: 35.0	m	Gas Velocity	: 23.1	m/s
Diameter	: 3.06	m	Flow rate*	: 6,273	Ncu,m ³ /min
Temperature	: 157.8	°C	Excess Oxygen	: 14.2	%
Moisture	: 10.6	%			

PARAMETER	UNIT	RESULT*		STANDARD	REFERENCE
		14.2%O ₂	7%O ₂	7%O ₂	
					METHOD
Particulate matter	mg/Ncu,m.	1.79	3.73	60 ^{1/2} (5 ^{2/2})	US EPA Method 5

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG.NO.7-239-8-8183

Manee Poowasanpet

(Miss Narisa Poowasanpet)

Technical Management Team

REG.NO.7-239-8-6419

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

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

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

4. ^{1/2} Notification of Ministry of Industry B.E.2547 (2004).

5. ^{2/2} The value was assigned in EIA report.

The Monitoring Result of Emission Concentration

HRSG 3A

GLOW SPP 3 Co., Ltd.

March 14, 2022

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O ₂	Corrected Gas Conc @7% O ₂
1	14.28	14.26	37.02	37.02	77.50
2	14.26	14.24	36.61	36.61	76.41
3	14.25	14.23	36.15	36.15	75.34
Average	14.26	14.24	36.59	36.59	76.41

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O ₂	Corrected Gas Conc @7% O ₂
1	14.28	14.26	0.10	0.08	0.17
2	14.26	14.24	0.09	0.07	0.15
3	14.25	14.23	0.09	0.06	0.13
Average	14.26	14.24	0.09	0.07	0.15

GLOW SPP 3 Co., Ltd.
EMISSION TEST RESULT

Run # : 1
 Date: March 14, 2022
 Start time: 11:15 AM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 SO₂ instrument Model: API 100 AH
 Fuel Type : Natural Gas
 Location : HRSG 3A
 Finish time : 11:35 AM
 Serial No.: 111117-2
 Serial No.: 435
 Serial No.: 060
 Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:15 AM	14.29	36.31	0.10
11:16 AM	14.29	36.38	0.10
11:17 AM	14.28	36.43	0.10
11:18 AM	14.28	36.31	0.10
11:19 AM	14.28	36.34	0.10
11:20 AM	14.28	36.47	0.11
11:21 AM	14.28	36.64	0.10
11:22 AM	14.28	36.94	0.10
11:23 AM	14.28	37.27	0.10
11:24 AM	14.28	37.45	0.10
11:25 AM	14.28	37.51	0.12
11:26 AM	14.28	37.47	0.10
11:27 AM	14.27	37.09	0.10
11:28 AM	14.27	36.72	0.10
11:29 AM	14.27	36.82	0.10
11:30 AM	14.28	37.19	0.10
11:31 AM	14.28	37.48	0.10
11:32 AM	14.28	37.65	0.10
11:33 AM	14.28	37.77	0.10
11:34 AM	14.28	37.72	0.10
11:35 AM	14.27	37.38	0.10
Average	14.28	37.02	0.10

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd.
EMISSION TEST RESULT

Run # : 2
 Date: March 14, 2022
 Start time: 11:36 AM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 SO₂ instrument Model: API 100 AH
 Fuel Type : Natural Gas
 Location : HRSG 3A
 Finish time : 11:56 AM
 Serial No.: 111117-2
 Serial No.: 435
 Serial No.: 060
 Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:36 AM	14.27	37.02	0.10
11:37 AM	14.27	36.94	0.10
11:38 AM	14.27	36.97	0.10
11:39 AM	14.27	36.80	0.10
11:40 AM	14.26	36.63	0.11
11:41 AM	14.25	36.44	0.10
11:42 AM	14.26	36.27	0.10
11:43 AM	14.27	36.54	0.10
11:44 AM	14.27	36.91	0.10
11:45 AM	14.26	36.62	0.10
11:46 AM	14.26	36.32	0.10
11:47 AM	14.25	36.24	0.09
11:48 AM	14.26	36.20	0.09
11:49 AM	14.27	36.26	0.09
11:50 AM	14.27	36.48	0.08
11:51 AM	14.27	36.75	0.08
11:52 AM	14.27	36.96	0.08
11:53 AM	14.27	37.00	0.08
11:54 AM	14.26	36.76	0.08
11:55 AM	14.25	36.39	0.08
11:56 AM	14.25	36.27	0.07
Average	14.26	36.61	0.09

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: March 14, 2022
 Start time: 11:57 AM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 SO₂ instrument Model: API 100 AH
 Fuel Type: Natural Gas

Run #: 3
 Location: HRSG 3A
 Finish time: 12:17 PM
 Serial No.: 111117-2
 Serial No.: 435
 Serial No.: 060
 Test Operator: Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
11:57 AM	14.26	36.38	0.08
11:58 AM	14.25	36.51	0.07
11:59 AM	14.26	36.65	0.07
12:00 PM	14.25	36.64	0.07
12:01 PM	14.25	36.39	0.08
12:02 PM	14.25	36.27	0.09
12:03 PM	14.25	36.23	0.09
12:04 PM	14.24	36.09	0.09
12:05 PM	14.24	35.88	0.09
12:06 PM	14.24	35.76	0.09
12:07 PM	14.24	35.74	0.09
12:08 PM	14.25	35.81	0.09
12:09 PM	14.25	36.02	0.09
12:10 PM	14.25	36.24	0.09
12:11 PM	14.25	36.34	0.09
12:12 PM	14.25	36.36	0.09
12:13 PM	14.25	36.23	0.09
12:14 PM	14.24	35.99	0.09
12:15 PM	14.24	35.87	0.10
12:16 PM	14.24	35.82	0.10
12:17 PM	14.25	35.91	0.10
Average	14.25	36.15	0.09

Signature

(Miss Katesarin Vorradevitayaya)

Environmental Scientist



บริษัท ซีคอต จำกัด
SECOT CO., LTD.

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REFERENCE NO. : 222051-Stack_PM/Cogen_HRSG 3B
 SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 18/03/2022
 RECEIVED DATE : 19/03/2022 ANALYTICAL DATE : 19-21/03/2022
 REPORT DATE : 22/03/2022 SAMPLE CONDITION : Good
 STACK LOCATION : Cogen HRSG 3B SITE OPERATOR : Mr. Kittipong Thakoengsuk
 SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 35.0 m Gas Velocity : 23.3 m/s
 Diameter : 3.06 m Flow rate* : 6,160 Ncu.m./min
 Temperature : 163.1 °C Excess Oxygen : 14.3 %
 Moisture : 11.8 %

PARAMETER	UNIT	RESULT*		STANDARD	REFERENCE
		14.3%O ₂	7%O ₂	7%O ₂	METHOD
Particulate matter	mg/Ncu.m.	0.90	1.89	60 ¹ (5 ²)	US EPA Method 5

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG.NO. 2-239-9-8183

Narisara Poowasunetch

(Miss Narisara Poowasunetch)

Technical Management Team

REG.NO. 2-239-9-6419

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

4. ^{1/} Notification of Ministry of Industry B.E.2547 (2004).5. ^{2/} The value was assigned in EIA report.

The Monitoring Result of Emission Concentration
HRSG 3B
GLOW SPP 3 Co., Ltd.
March 18, 2022

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	14.28	14.26	42.79	42.79	89.58
2	14.33	14.32	42.54	42.54	89.86
3	14.34	14.33	43.05	43.05	91.08
Average	14.32	14.30	42.79	42.79	90.17

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	14.28	14.26	0.34	0.30	0.63
2	14.33	14.32	0.34	0.30	0.63
3	14.34	14.33	0.37	0.32	0.68
Average	14.32	14.30	0.35	0.31	0.65

GLOW SPP 3 Co., Ltd.
EMISSION TEST RESULT

Date: March 18, 2022
 Start time: 4:10 PM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 SO₂ instrument Model: API 100 AH
 Fuel Type : Natural Gas

Run #: 1
 Location : HRSG 3B
 Finish time : 4:30 PM
 Serial No.: 111117-2
 Serial No.: 435
 Serial No.: 060
 Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
4:10 PM	14.25	43.06	0.37
4:11 PM	14.26	42.93	0.37
4:12 PM	14.25	42.87	0.36
4:13 PM	14.25	42.90	0.36
4:14 PM	14.25	42.79	0.36
4:15 PM	14.25	42.68	0.35
4:16 PM	14.23	42.86	0.35
4:17 PM	14.24	42.83	0.34
4:18 PM	14.23	42.75	0.34
4:19 PM	14.23	42.71	0.34
4:20 PM	14.23	42.57	0.34
4:21 PM	14.24	42.50	0.34
4:22 PM	14.27	42.56	0.33
4:23 PM	14.31	42.60	0.33
4:24 PM	14.32	42.67	0.33
4:25 PM	14.32	42.89	0.33
4:26 PM	14.34	43.00	0.33
4:27 PM	14.33	43.07	0.33
4:28 PM	14.34	42.96	0.33
4:29 PM	14.33	42.75	0.33
4:30 PM	14.33	42.66	0.33
Average	14.28	42.79	0.34

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: March 18, 2022
 Start time: 4:31 PM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 SO₂ instrument Model: API 100 AH
 Fuel Type : Natural Gas

Run #: 2
 Location : HRSG 3B
 Finish time : 4:51 PM
 Serial No.: 111117-2
 Serial No.: 435
 Serial No.: 060
 Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
4:31 PM	14.33	42.49	0.33
4:32 PM	14.32	42.40	0.33
4:33 PM	14.33	42.44	0.33
4:34 PM	14.34	42.45	0.33
4:35 PM	14.32	42.39	0.33
4:36 PM	14.34	42.34	0.33
4:37 PM	14.32	42.57	0.33
4:38 PM	14.35	42.83	0.33
4:39 PM	14.33	42.86	0.33
4:40 PM	14.33	42.75	0.33
4:41 PM	14.33	42.67	0.34
4:42 PM	14.35	42.67	0.34
4:43 PM	14.33	42.71	0.34
4:44 PM	14.34	42.66	0.35
4:45 PM	14.33	42.48	0.35
4:46 PM	14.33	42.44	0.35
4:47 PM	14.33	42.47	0.36
4:48 PM	14.32	42.40	0.36
4:49 PM	14.32	42.37	0.36
4:50 PM	14.34	42.49	0.37
4:51 PM	14.33	42.50	0.37
Average	14.33	42.54	0.34

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

GLOW SPP 3 Co., Ltd. EMISSION TEST RESULT

Date: March 18, 2022
 Start time: 4:52 PM
 O₂ instrument Model: AMI 70
 NO_x instrument Model: TELEDYNE 200 EM
 SO₂ instrument Model: API 100 AH
 Fuel Type : Natural Gas

Run #: 3
 Location : HRSG 3B
 Finish time : 5:12 PM
 Serial No.: 111117-2
 Serial No.: 435
 Serial No.: 060
 Test Operator : Song H.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)
4:52 PM	14.33	42.49	0.37
4:53 PM	14.33	42.48	0.37
4:54 PM	14.33	42.45	0.37
4:55 PM	14.33	42.36	0.38
4:56 PM	14.33	42.33	0.38
4:57 PM	14.33	42.40	0.38
4:58 PM	14.33	42.39	0.38
4:59 PM	14.33	42.54	0.37
5:00 PM	14.33	42.76	0.37
5:01 PM	14.32	42.63	0.37
5:02 PM	14.32	42.58	0.37
5:03 PM	14.34	42.84	0.37
5:04 PM	14.35	43.18	0.37
5:05 PM	14.34	43.45	0.37
5:06 PM	14.36	43.48	0.37
5:07 PM	14.36	43.48	0.36
5:08 PM	14.37	43.64	0.36
5:09 PM	14.35	43.91	0.36
5:10 PM	14.37	44.04	0.36
5:11 PM	14.36	44.18	0.35
5:12 PM	14.38	44.37	0.35
Average	14.34	43.05	0.37

Signature

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

คุณภาพน้ำทิ้ง



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0013/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 05/01/2022	SAMPLING TIME	: 09:47
RECEIVED DATE	: 06/01/2022	ANALYTICAL DATE	: 06-12/01/2022
REPORT DATE	: 13/01/2022	SITE OPERATOR	: Mr. Chanatip Singkasemak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD*
Temperature	°C	2550	< 0.5	30.9	≤ 40
pH	-	4500-H B	< 0.10	7.96	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	3.41	-
Conductivity	µS/cm	2510 B	< 1.0	50,300	-
Salinity	ppt	2520 B	< 0.01	33.0	-
Total Dissolved Solids	mg/l	2540 C	< 50	35,760	40,520**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.9	-

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

Khachuda Insorn

(Miss Khachuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 35,220 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0058/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 12/01/2022	SAMPLING TIME	: 10.21
RECEIVED DATE	: 13/01/2022	ANALYTICAL DATE	: 13-19/01/2022
REPORT DATE	: 20/01/2022	SITE OPERATOR	: Mr. Chanatip Singkasemak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD*
Temperature	°C	2550	< 0.5	32.9	≤ 40
pH	-	4500-H B	< 0.10	7.81	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	2.65	-
Conductivity	µS/cm	2510 B	< 1.0	49,330	-
Salinity	ppt	2520 B	< 0.01	32.0	-
Total Dissolved Solids	mg/l	2540 C	< 50	33,920	40,520**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.3	-

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

Khachuda Insorn

(Miss Khachuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

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Technical Management Team

REG. NO. 2-239-ก-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 35,220 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0101/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 19/01/2022	SAMPLING TIME	: 10.45
RECEIVED DATE	: 20/01/2022	ANALYTICAL DATE	: 20-25/01/2022
REPORT DATE	: 26/01/2022	SITE OPERATOR	: Mr. Watcharakan Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD*
Temperature	°C	2550 B	< 0.5	31.4	≤ 40
pH		4500-H B	< 0.10	8.03	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	3.22	
Conductivity	μS/cm	2510 B	< 1.0	49,200	
Salinity	ppt	2520 B	< 0.01	32.2	
Total Dissolved Solids	mg/l	2540 C	< 50	34,160	41,700**
Total Suspended Solids	mg/l	2540 D	< 5	5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.8	

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

Khemchuda Jansorn

(Miss Khemchuda Jansorn)

Analyst

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Technical Management Team

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 3. * Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 36,700 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0101/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 19/01/2022	SAMPLING TIME	: 10.45
RECEIVED DATE	: 20/01/2022	ANALYTICAL DATE	: 20-24/01/2022
REPORT DATE	: 26/01/2022	SITE OPERATOR	: Mr. Watcharakan Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD*
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0012	≤ 0.25
Iron (Fe)	mg/l	3120 B	< 0.004	< 0.05	
Lead (Pb)	mg/l	3113 B	< 0.003	ND	≤ 0.2
Mercury (Hg)	mg/l	3112 B	< 0.00005	ND	≤ 0.005
Selenium (Se)	mg/l	3114 C	< 0.0005	ND	≤ 0.02

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

Krisana Chanthoom

(Miss Krisana Chanthoom)

Analyst

REG. NO. 7-239-ก-7802

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-5863

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 3. * Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0101/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 19/01/2022	SAMPLING TIME	: 10.45
RECEIVED DATE	: 20/01/2022	ANALYTICAL DATE	: 20-24/01/2022
REPORT DATE	: 26/01/2022	SITE OPERATOR	: Mr. Watcharakon Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD
Total Petroleum Hydrocarbon					
- C ₆ -C ₉	µg/l	5030C/8260D	< 9.00	ND	-
- C ₁₀ -C ₁₄	µg/l	3510C/8015D	< 15.00	ND	-
- C ₁₅ -C ₂₃	µg/l	3510C/8015D	< 35.00	ND	-
- C ₂₅ -C ₃₆	µg/l	3510C/8015D	< 20.00	ND	-

REFERENCE : United States Environmental Protection Agency , SW-846 , 3rd edition, US EPA 2020.

Miss Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Analyst

Mrs. Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

- Remark :
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 3. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0122/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 26/01/2022	SAMPLING TIME	: 11.23
RECEIVED DATE	: 27/01/2022	ANALYTICAL DATE	: 27/01/2022-01/02/2022
REPORT DATE	: 02/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD*
Temperature	°C	2550	< 0.5	34.6	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.99	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	1.90	-
Conductivity	µS/cm	2510 B	< 1.0	50,200	-
Salinity	ppt	2520 B	< 0.01	33.4	-
Total Dissolved Solids	mg/l	2540 C	< 50	33,880	42,020**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.3	-

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

Miss Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-B-5976

Mrs. Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-B-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station I) = 37,020 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 0160/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 02/02/2022 SAMPLING TIME : 12.00
RECEIVED DATE : 03/02/2022 ANALYTICAL DATE : 03-09/02/2022
REPORT DATE : 10/02/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD*
Temperature	°C	2550	< 0.5	33.0	≤ 40
pH	-	4500-H B	< 0.10	8.10	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	4.24	-
Conductivity	µS/cm	2510 B	< 1.0	49,550	-
Salinity	ppt	2520 B	< 0.01	31.2	-
Total Dissolved Solids	mg/l	2540 C	< 50	36,460	39,860**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	6.6	-

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

Khemchuda Insom
(Miss Khemchuda Insom)

Analyst

REG. NO. 7-239-ก-5976

Araya Tipparuk
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Technical Management Team

REG. NO. 7-239-ก-5863

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and
Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 34,860 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 0251/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 09/02/2022 SAMPLING TIME : 11.13
RECEIVED DATE : 10/02/2022 ANALYTICAL DATE : 10-17/02/2022
REPORT DATE : 17/02/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD*
Temperature	°C	2550	< 0.5	32.6	≤ 40
pH	-	4500-H B	< 0.10	7.95	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	2.64	-
Conductivity	µS/cm	2510 B	< 1.0	44,090	-
Salinity	ppt	2520 B	< 0.01	31.0	-
Total Dissolved Solids	mg/l	2540 C	< 50	35,840	41,700**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.4	-

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

Khemchuda Insom
(Miss Khemchuda Insom)

Analyst

REG. NO. 7-239-ก-5976

Araya Tipparuk
(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-5863

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and
Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 36,700 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0309/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 17/02/2022	SAMPLING TIME	: 10.26
RECEIVED DATE	: 18/02/2022	ANALYTICAL DATE	: 18-24/02/2022
REPORT DATE	: 25/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				Collected Discharge Point	
Temperature	°C	2550 B	< 0.5	32.5	≤ 40
pH	-	4500-H B	< 0.10	7.91	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	3.38	-
Conductivity	µS/cm	2510 B	< 1.0	49,690	-
Salinity	ppt	2520 B	< 0.01	31.3	-
Total Dissolved Solids	mg/l	2540 C	< 50	35,840	40,700**
Total Suspended Solids	mg/l	2540 D	< 5	5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.1	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 35,700 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0351/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 23/02/2022	SAMPLING TIME	: 10.15
RECEIVED DATE	: 24/02/2022	ANALYTICAL DATE	: 24/02/2022-02/03/2022
REPORT DATE	: 02/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				Collected Discharge Point	
Temperature	°C	2550	< 0.5	32.6	≤ 40
pH	-	4500-H B	< 0.10	7.91	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	4.73	-
Conductivity	µS/cm	2510 B	< 1.0	45,290	-
Salinity	ppt	2520 B	< 0.01	31.0	-
Total Dissolved Solids	mg/l	2540 C	< 50	34,960	38,780**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.3	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

- Remark :**
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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 33,780 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0411/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 02/03/2022	SAMPLING TIME	: 11.03
RECEIVED DATE	: 03/03/2022	ANALYTICAL DATE	: 03-10/03/2022
REPORT DATE	: 10/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				Collected Discharge Point	
Temperature	°C	2550	< 0.5	31.8	≤ 40
pH	-	4500-H B	< 0.10	7.25	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	8.04	-
Conductivity	µS/cm	2510 B	< 1.0	47,940	-
Salinity	ppt	2520 B	< 0.01	31.7	-
Total Dissolved Solids	mg/l	2540 C	< 50	35,010	40,920**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.6	-

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

Khemchuda Insom

(Miss Khemchuda Insom)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 35,920 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0486/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 09/03/2022	SAMPLING TIME	: 10.58
RECEIVED DATE	: 10/03/2022	ANALYTICAL DATE	: 10-16/03/2022
REPORT DATE	: 17/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				Collected Discharge Point	
Temperature	°C	2550	< 0.5	33.8	≤ 40
pH	-	4500-H B	< 0.10	7.44	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	7.55	-
Conductivity	µS/cm	2510 B	< 1.0	47,400	-
Salinity	ppt	2520 B	< 0.01	31.6	-
Total Dissolved Solids	mg/l	2540 C	< 50	34,980	40,260**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	2.5	-

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

Khemchuda Insom

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Analyst

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Technical Management Team

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 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 35,260 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0541/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 16/03/2022	SAMPLING TIME	: 10.46
RECEIVED DATE	: 17/03/2022	ANALYTICAL DATE	: 17-22/03/2022
REPORT DATE	: 22/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasomsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD*
Temperature	°C	2550 B	< 0.5	34.3	≤ 40
pH	-	4500-H ⁺ B	< 0.10	8.02	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	2.32	-
Conductivity	µS/cm	2510 B	< 1.0	47,400	-
Salinity	ppt	2520 B	< 0.01	30.9	-
Total Dissolved Solids	mg/l	2540 C	< 50	36,260	42,800**
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.5	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-R-5976

Araya Tipparuk

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Technical Management Team

REG. NO. 2-239-R-5863

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station I) = 37,580 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0602/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 23/03/2022	SAMPLING TIME	: 11.00
RECEIVED DATE	: 24/03/2022	ANALYTICAL DATE	: 24-29/03/2022
REPORT DATE	: 30/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasomsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD*
Temperature	°C	2550	< 0.5	31.8	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.53	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	3.34	-
Conductivity	µS/cm	2510 B	< 1.0	43,300	-
Salinity	ppt	2520 B	< 0.01	28.9	-
Total Dissolved Solids	mg/l	2540 C	< 50	36,320	42,800**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.7	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-R-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-R-5863

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station I) = 37,800 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 0662/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 30/03/2022 SAMPLING TIME : 14.45
RECEIVED DATE : 31/03/2022 ANALYTICAL DATE : 31/03/2022-07/04/2022
REPORT DATE : 18/04/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_March

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD*
		METHODS	(non-detectable)	Collected Discharge Point	
Temperature	°C	2550	< 0.5	33.8	≤ 40
pH	-	4500-H B	< 0.10	8.05	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	3.81	-
Conductivity	µS/cm	2510 B	< 1.0	45,900	-
Salinity	ppt	2520 B	< 0.01	30.4	-
Total Dissolved Solids	mg/l	2540 C	< 50	36,540	39,940**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.8	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

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Technical Management Team

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4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 34,940 mg/l).
5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 0697/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 04/04/2022 SAMPLING TIME : 10.55
RECEIVED DATE : 05/04/2022 ANALYTICAL DATE : 05-12/04/2022
REPORT DATE : 18/04/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_April

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD*
		METHODS	(non-detectable)	Collected Discharge Point	
Temperature	°C	2550	< 0.5	33.5	≤ 40
pH	-	4500-H B	< 0.10	7.99	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	6.06	-
Conductivity	µS/cm	2510 B	< 1.0	49,000	-
Salinity	ppt	2520 B	< 0.01	32.9	-
Total Dissolved Solids	mg/l	2540 C	< 50	36,420	41,360**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.9	-

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

Khemchuda Insorn

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Analyst

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4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 36,360 mg/l).
5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 0795/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 11/04/2022 SAMPLING TIME : 10.48
RECEIVED DATE : 12/04/2022 ANALYTICAL DATE : 12-19/04/2022
REPORT DATE : 19/04/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD*
Temperature	°C	2550 B	< 0.5	33.6	≤ 40
pH	-	4500-H B	< 0.10	7.98	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	3.51	-
Conductivity	µS/cm	2510 B	< 1.0	49,800	-
Salinity	ppt	2520 B	< 0.01	32.6	-
Total Dissolved Solids	mg/l	2540 C	< 50	36,920	40,000**
Total Suspended Solids	mg/l	2540 D	< 5	5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.6	-

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

Khemchuda Insom

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Analyst

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4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 35,000 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 0815/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 20/04/2022 SAMPLING TIME : 10.37
RECEIVED DATE : 21/04/2022 ANALYTICAL DATE : 21-26/04/2022
REPORT DATE : 27/04/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD*
Temperature	°C	2550	< 0.5	34.7	≤ 40
pH	-	4500-H B	< 0.10	7.94	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	3.96	-
Conductivity	µS/cm	2510 B	< 1.0	47,800	-
Salinity	ppt	2520 B	< 0.01	31.2	-
Total Dissolved Solids	mg/l	2540 C	< 50	37,140	41,600**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	4.7	-

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

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4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 36,600 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0873/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 27/04/2022	SAMPLING TIME	: 11.45
RECEIVED DATE	: 28/04/2022	ANALYTICAL DATE	: 28/04/2022-05/05/2022
REPORT DATE	: 06/05/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD*
Temperature	°C	2550	< 0.5	36.0	≤ 40
pH		4500-H B	< 0.10	8.18	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	9.35	-
Conductivity	µS/cm	2510 B	< 1.0	47,900	-
Salinity	ppt	2520 B	< 0.01	31.4	-
Total Dissolved Solids	mg/l	2540 C	< 50	35,640	40,800**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.5	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG.NO. 7-239-ก-5976

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 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 35,800 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0943/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 06/05/2022	SAMPLING TIME	: 11.00
RECEIVED DATE	: 07/05/2022	ANALYTICAL DATE	: 07-14/05/2022
REPORT DATE	: 17/05/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD*
Temperature	°C	2550	< 0.5	35.4	≤ 40
pH		4500-H B	< 0.10	7.82	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	3.15	-
Conductivity	µS/cm	2510 B	< 1.0	48,200	-
Salinity	ppt	2520 B	< 0.01	31.4	-
Total Dissolved Solids	mg/l	2540 C	< 50	33,120	41,980**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.2	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 36,980 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 1001/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 11/05/2022	SAMPLING TIME	: 11.10
RECEIVED DATE	: 12/05/2022	ANALYTICAL DATE	: 12-20/05/2022
REPORT DATE	: 20/05/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_May

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD*
		METHODS	(non-detectable)	Collected Discharge Point	
Temperature	°C	2550	< 0.5	33.7	≤ 40
pH	-	4500-H B	< 0.10	7.82	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	3.55	*
Conductivity	µS/cm	2510 B	< 1.0	48,040	*
Salinity	ppt	2520 B	< 0.01	31.6	*
Total Dissolved Solids	mg/l	2540 C	< 50	34,900	40,760**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	6.6	*

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparak

(Mrs. Araya Tipparak)

Technical Management Team

REG. NO. 2-239-ก-5863

- Remark :**
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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 35,760 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 1059/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 18/05/2022	SAMPLING TIME	: 11.10
RECEIVED DATE	: 19/05/2022	ANALYTICAL DATE	: 19-28/05/2022
REPORT DATE	: 31/05/2022	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_May

PARAMETER	UNIT	ANALYSIS	ND	STATION		STANDARD*
		METHODS	(non-detectable)	Collected Discharge Point		
Temperature	°C	2550 B	< 0.5	34.9		≤ 40
pH	-	4500-H B	< 0.10	7.85		5.5-9.0
Turbidity	NTU	2130 B	< 0.02	2.51		*
Conductivity	µS/cm	2510 B	< 1.0	48,520		*
Salinity	ppt	2520 B	< 0.01	31.6		*
Total Dissolved Solids	mg/l	2540 C	< 50	34,720		40,500**
Total Suspended Solids	mg/l	2540 D	< 5	< 5		≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0		≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	4.8		*

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparak

(Mrs. Araya Tipparak)

Technical Management Team

REG. NO. 2-239-ก-5863

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 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 35,500 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1059/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 18/05/2022 SAMPLING TIME : 11.10
RECEIVED DATE : 19/05/2022 ANALYTICAL DATE : 19-24/05/2022
REPORT DATE : 31/05/2022 SITE OPERATOR : Mr. Aniwat Pimwanna
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD*
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0014	< 0.25
Iron (Fe)	mg/l	3120 B	< 0.004	0.07	-
Lead (Pb)	mg/l	3113 B	< 0.003	ND	≤ 0.2
Mercury (Hg)	mg/l	3112 B	< 0.00005	ND	≤ 0.005
Selenium (Se)	mg/l	3114 C	< 0.0005	ND	≤ 0.02

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

Krisana Chanthuon
(Miss Krisana Chanthuon)

Analyst

REG.NO.3-239-B-7802

Araya Tipparak
(Mrs. Araya Tipparak)

Technical Management Team

REG.NO.3-239-B-5863

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

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3. *Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).

4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1059/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 18/05/2022 SAMPLING TIME : 11.10
RECEIVED DATE : 19/05/2022 ANALYTICAL DATE : 23, 26-27/05/2022
REPORT DATE : 31/05/2022 SITE OPERATOR : Mr. Aniwat Pimwanna
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD
Total Petroleum Hydrocarbon					
- C ₆ -C ₉	µg/l	5030C/8260D	< 9.00	ND	-
- C ₁₀ -C ₁₄	µg/l	3510C/8015D	< 15.00	ND	-
- C ₁₅ -C ₂₈	µg/l	3510C/8015D	< 35.00	ND	-
- C ₂₉ -C ₃₆	µg/l	3510C/8015D	< 20.00	ND	-

REFERENCE : United States Environmental Protection Agency, SW-846, 3rd edition, US EPA 2020.

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Analyst

Araya Tipparak
(Mrs. Araya Tipparak)

Technical Management Team

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3. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1127/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 25/05/2022 SAMPLING TIME : 14.13
RECEIVED DATE : 26/05/2022 ANALYTICAL DATE : 26-31/05/2022
REPORT DATE : 01/06/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				Collected Discharge Point	
Temperature	°C	2550	< 0.5	34.4	≤ 40
pH		4500-H ⁺ B	< 0.10	7.75	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	5.69	
Conductivity	µS/cm	2510 B	< 1.0	49,235	
Salinity	ppt	2520 B	< 0.01	31.8	
Total Dissolved Solids	mg/l	2540 C	< 50	36,150	44,040**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	4.3	

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 17th ED. 2017 (AWWA, APHA, WEF)

Khemichuda Inorn

(Miss Khemichuda Inorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 39,040 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1184/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 01/06/2022 SAMPLING TIME : 10.30
RECEIVED DATE : 02/06/2022 ANALYTICAL DATE : 02-07/06/2022
REPORT DATE : 08/06/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				Collected Discharge Point	
Temperature	°C	2550	< 0.5	34.5	≤ 40
pH		4500-H ⁺ B	< 0.10	7.49	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	13.00	
Conductivity	µS/cm	2510 B	< 1.0	49,660	
Salinity	ppt	2520 B	< 0.01	32.7	
Total Dissolved Solids	mg/l	2540 C	< 50	36,920	38,860**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	4.2	

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 17th ED. 2017 (AWWA, APHA, WEF)

Khemichuda Inorn

(Miss Khemichuda Inorn)

Analyst

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Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 33,860 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 1249/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 08/06/2022	SAMPLING TIME	: 10.31
RECEIVED DATE	: 09/06/2022	ANALYTICAL DATE	: 09-14/06/2022
REPORT DATE	: 14/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				Collected Discharge Point	
Temperature	°C	2550	< 0.5	34.8	< 40
pH		4500-H ¹ B	< 0.10	7.76	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	7.38	-
Conductivity	µS/cm	2510 B	< 1.0	48,570	-
Salinity	ppt	2520 B	< 0.01	31.5	-
Total Dissolved Solids	mg/l	2540 C	< 50	34,640	40,960**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	4.6	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

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Technical Management Team

REG. NO. 2-239-ก-5863

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 35,960 mg/l).
5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 1302/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 15/06/2022	SAMPLING TIME	: 11.10
RECEIVED DATE	: 16/06/2022	ANALYTICAL DATE	: 16-25/06/2022
REPORT DATE	: 28/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				Collected Discharge Point	
Temperature	°C	2550 B	< 0.5	35.1	≤ 40
pH		4500-H ¹ B	< 0.10	8.10	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	3.52	-
Conductivity	µS/cm	2510 B	< 1.0	48,440	-
Salinity	ppt	2520 B	< 0.01	31.7	-
Total Dissolved Solids	mg/l	2540 C	< 50	35,760	41,460**
Total Suspended Solids	mg/l	2540 D	< 5	9	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	6.2	-

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

Khemchuda Insorn

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Analyst

REG. NO. 2-239-ก-5976

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Technical Management Team

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 36,460 mg/l).
5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 1356/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 22/06/2022	SAMPLING TIME	: 10.15
RECEIVED DATE	: 23/06/2022	ANALYTICAL DATE	: 23-28/06/2022
REPORT DATE	: 29/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD*
Temperature	°C	2550	< 0.5	34.4	≤ 40
pH	-	4500-H B	< 0.10	8.13	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	4.82	-
Conductivity	μS/cm	2510 B	< 1.0	49,580	-
Salinity	ppt	2520 B	< 0.01	31.8	-
Total Dissolved Solids	mg/l	2540 C	< 50	33,900	38,180**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.3	-

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

Khemchuda Insom

(Miss Khemchuda Insom)

Analyst

REG. NO. 7-239-R-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-R-5863

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 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 33,180 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 1389/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 29/06/2022	SAMPLING TIME	: 10.30
RECEIVED DATE	: 30/06/2022	ANALYTICAL DATE	: 30/06/2022-05/07/2022
REPORT DATE	: 06/07/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Collected Discharge Point	STANDARD*
Temperature	°C	2550	< 0.5	35.0	≤ 40
pH	-	4500-H B	< 0.10	8.00	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	2.55	-
Conductivity	μS/cm	2510 B	< 1.0	47,910	-
Salinity	ppt	2520 B	< 0.01	31.0	-
Total Dissolved Solids	mg/l	2540 C	< 50	34,200	41,540**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.1	-

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

Khemchuda Insom

(Miss Khemchuda Insom)

Analyst

REG. NO. 7-239-R-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-R-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 36,540 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0013/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 05/01/2022	SAMPLING TIME	: 08.57
RECEIVED DATE	: 06/01/2022	ANALYTICAL DATE	: 06-12/01/2022
REPORT DATE	: 13/01/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				North Canal Point	
Temperature	°C	2550 B	< 0.5	35.5	≤ 40
pH	-	4500-H B	< 0.10	8.32	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	1.02	-
Conductivity	µS/cm	2510 B	< 1.0	260	-
Salinity	ppt	2520 B	< 0.01	0.0	-
Total Dissolved Solids	mg/l	2540 C	< 50	164	40,220**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.8	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-5863

- Remark :
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 35,220 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0058/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 12/01/2022	SAMPLING TIME	: 09.33
RECEIVED DATE	: 13/01/2022	ANALYTICAL DATE	: 13-19/01/2022
REPORT DATE	: 20/01/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				North Canal Point	
Temperature	°C	2550 B	< 0.5	36.7	≤ 40
pH	-	4500-H B	< 0.10	8.08	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	2.45	-
Conductivity	µS/cm	2510 B	< 1.0	328	-
Salinity	ppt	2520 B	< 0.01	0.1	-
Total Dissolved Solids	mg/l	2540 C	< 50	182	40,520**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.0	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-5976

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Technical Management Team

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 35,520 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0101/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 19/01/2022	SAMPLING TIME	: 09.25
RECEIVED DATE	: 20/01/2022	ANALYTICAL DATE	: 20-25/01/2022
REPORT DATE	: 26/01/2022	SITE OPERATOR	: Mr. Watcharakon Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				North Canal Point	
Temperature	°C	2550 B	< 0.5	33.9	≤ 40
pH	-	4500-H B	< 0.10	8.83	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	0.74	-
Conductivity	µS/cm	2510 B	< 1.0	255	-
Salinity	ppt	2520 B	< 0.01	0.0	-
Total Dissolved Solids	mg/l	2540 C	< 50	124	41,700**
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.8	-

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

Khemchuda Inseem

(Miss Khemchuda Inseem)

Analyst

REG. NO. 7-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-5863

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

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3. * Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and
Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 36,700 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0101/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 19/01/2022	SAMPLING TIME	: 09.25
RECEIVED DATE	: 20/01/2022	ANALYTICAL DATE	: 20-24/01/2022
REPORT DATE	: 26/01/2022	SITE OPERATOR	: Mr. Watcharakon Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				North Canal Point	
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0010	≤ 0.25
Iron (Fe)	mg/l	3120 B	< 0.004	< 0.05	-
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 0.2
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005
Selenium (Se)	mg/l	3114 C	< 0.0005	ND	≤ 0.02

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

Krisana Chanthoom

(Miss Krisana Chanthoom)

Analyst

REG. NO. 7-239-ก-7802

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-5863

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

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3. * Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and
Notification of the Ministry of Industry, B.E.2560 (2017).

4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0101/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 19/01/2022	SAMPLING TIME	: 09.25
RECEIVED DATE	: 20/01/2022	ANALYTICAL DATE	: 20-24/01/2022
REPORT DATE	: 26/01/2022	SITE OPERATOR	: Mr. Watcharakon Premakbato
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD
Total Petroleum Hydrocarbon					
- C ₆ -C ₉	µg/l	5030C/8260D	< 9.00	ND	-
- C ₁₀ -C ₁₄	µg/l	3510C/8015D	< 15.00	ND	-
- C ₁₅ -C ₂₅	µg/l	3510C/8015D	< 35.00	ND	-
- C ₂₇ -C ₃₆	µg/l	3510C/8015D	< 20.00	ND	-

REFERENCE : United States Environmental Protection Agency, SW-846, 1st edition, US EPA 2020.

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

- Remark :
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 3. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0122/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 26/01/2022	SAMPLING TIME	: 09.59
RECEIVED DATE	: 27/01/2022	ANALYTICAL DATE	: 27/01/2022-01/02/2022
REPORT DATE	: 02/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	39.2	≤ 40
pH		4500-H B	< 0.10	8.04	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	1.72	-
Conductivity	µS/cm	2510 B	< 1.0	236	-
Salinity	ppt	2520 B	< 0.01	0.1	-
Total Dissolved Solids	mg/l	2540 C	< 50	92	42,020**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.1	-

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

Khemchuda Insom

(Miss Khemchuda Insom)

Analyst

REG. NO. 7-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 37,020 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0160/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 02/02/2022	SAMPLING TIME	: 09.50
RECEIVED DATE	: 03/02/2022	ANALYTICAL DATE	: 03-09/02/2022
REPORT DATE	: 10/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				North Canal Point	
Temperature	°C	2550 B	< 0.5	35.5	≤ 40
pH		4500-H B	< 0.10	8.05	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	1.06	-
Conductivity	µS/cm	2510 B	< 1.0	272	-
Salinity	ppt	2520 B	< 0.01	0.0	-
Total Dissolved Solids	mg/l	2540 C	< 50	98	39,860**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	6.0	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-5863

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 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 34,860 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0251/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 09/02/2022	SAMPLING TIME	: 09.29
RECEIVED DATE	: 10/02/2022	ANALYTICAL DATE	: 10-17/02/2022
REPORT DATE	: 17/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				North Canal Point	
Temperature	°C	2550 B	< 0.5	37.9	≤ 40
pH		4500-H B	< 0.10	7.98	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	0.83	-
Conductivity	µS/cm	2510 B	< 1.0	227	-
Salinity	ppt	2520 B	< 0.01	0.0	-
Total Dissolved Solids	mg/l	2540 C	< 50	80	41,700**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.1	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-5863

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 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 34,700 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0309/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 17/02/2022	SAMPLING TIME	: 09:35
RECEIVED DATE	: 18/02/2022	ANALYTICAL DATE	: 18-24/02/2022
REPORT DATE	: 25/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550-B	< 0.5	36.6	≤ 40
pH		4500-H ⁺ B	< 0.10	8.00	5.5-9.0
Turbidity	NTU	2130-B	< 0.02	0.97	
Conductivity	µS/cm	2510-B	< 1.0	329	
Salinity	ppt	2520-B	< 0.01	0.1	
Total Dissolved Solids	mg/l	2540-C	< 50	126	40,700**
Total Suspended Solids	mg/l	2540-D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210-B	< 1.0	< 1.0	≤ 20
Dissolved Oxygen	mg/l	4500-O-G	< 0.1	5.4	

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 35,700 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0351/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 23/02/2022	SAMPLING TIME	: 09:30
RECEIVED DATE	: 24/02/2022	ANALYTICAL DATE	: 24/02/2022-02/03/2022
REPORT DATE	: 02/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550-B	< 0.5	34.9	≤ 40
pH		4500-H ⁺ B	< 0.10	8.27	5.5-9.0
Turbidity	NTU	2130-B	< 0.02	1.03	
Conductivity	µS/cm	2510-B	< 1.0	968	
Salinity	ppt	2520-B	< 0.01	0.4	
Total Dissolved Solids	mg/l	2540-C	< 50	492	38,780**
Dissolved Oxygen	mg/l	4500-O-G	< 0.1	5.9	

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 35,700 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0411/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 02/03/2022	SAMPLING TIME	: 09.50
RECEIVED DATE	: 03/03/2022	ANALYTICAL DATE	: 03-10/03/2022
REPORT DATE	: 10/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	37.3	≤ 40
pH		4500-H ⁺ B	< 0.10	8.14	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	3.46	*
Conductivity	µS/cm	2510 B	< 1.0	526	*
Salinity	ppt	2520 B	< 0.01	0.2	*
Total Dissolved Solids	mg/l	2540 C	< 50	253	40,920**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	4.8	*

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 1-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 1-239-ก-5863

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

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and
Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 35,920 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0504/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 10/03/2022	SAMPLING TIME	: 14.03
RECEIVED DATE	: 11/03/2022	ANALYTICAL DATE	: 11-16/03/2022
REPORT DATE	: 17/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	38.9	≤ 40
pH		4500-H ⁺ B	< 0.10	8.63	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	0.94	*
Conductivity	µS/cm	2510 B	< 1.0	272	*
Salinity	ppt	2520 B	< 0.01	0.1	*
Total Dissolved Solids	mg/l	2540 C	< 50	130	40,260**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	6.2	*

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 1-239-ก-5976

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Technical Management Team

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and
Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 35,260 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) **REQUEST SERVICE No.** : 0541/65
SAMPLING BY : SECOT Co., Ltd. **SAMPLING METHOD** : Grab
SAMPLING DATE : 16/03/2022 **SAMPLING TIME** : 09.16
RECEIVED DATE : 17/03/2022 **ANALYTICAL DATE** : 17-22/03/2022
REPORT DATE : 22/03/2022 **SITE OPERATOR** : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal **FILE CODE** : 222051_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	35.3	≤ 40
pH	-	4500-H B	< 0.10	7.95	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	0.83	-
Conductivity	µS/cm	2510 B	< 1.0	344	-
Salinity	ppt	2520 B	< 0.01	0.2	-
Total Dissolved Solids	mg/l	2540 C	< 50	222	42,580**
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.2	-

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 11th ED. 2017 (WWW.APHA.WEBSITE)

Khemchuda Insorn

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Technical Management Team

REG. NO. 7-239-ก-5863

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and

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

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water

(TDS value of the receiving water (Station 1) = 37,580 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) **REQUEST SERVICE No.** : 0602/65
SAMPLING BY : SECOT Co., Ltd. **SAMPLING METHOD** : Grab
SAMPLING DATE : 23/03/2022 **SAMPLING TIME** : 09.09
RECEIVED DATE : 24/03/2022 **ANALYTICAL DATE** : 24-29/03/2022
REPORT DATE : 30/03/2022 **SITE OPERATOR** : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal **FILE CODE** : 222051_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	28.3	≤ 40
pH	-	4500-H B	< 0.10	7.74	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	5.94	-
Conductivity	µS/cm	2510 B	< 1.0	939	-
Salinity	ppt	2520 B	< 0.01	0.5	-
Total Dissolved Solids	mg/l	2540 C	< 50	130	42,800**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	6.4	-

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 11th ED. 2017 (WWW.APHA.WEBSITE)

Khemchuda Insorn

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Technical Management Team

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and

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

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water

(TDS value of the receiving water (Station 1) = 37,580 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0689/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 03/04/2022	SAMPLING TIME	: 10.07
RECEIVED DATE	: 04/04/2022	ANALYTICAL DATE	: 04-10/04/2022
REPORT DATE	: 18/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	25.6	≤ 40
pH	-	4500-H B	< 0.10	8.98	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	0.73	-
Conductivity	µS/cm	2510 B	< 1.0	590	-
Salinity	ppt	2520 B	< 0.01	0.2	-
Total Dissolved Solids	mg/l	2540 C	< 50	328	39,940**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	6.0	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 34,940 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0697/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 04/04/2022	SAMPLING TIME	: 10.05
RECEIVED DATE	: 05/04/2022	ANALYTICAL DATE	: 05-12/04/2022
REPORT DATE	: 18/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	29.7	≤ 40
pH	-	4500-H B	< 0.10	8.30	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	1.42	-
Conductivity	µS/cm	2510 B	< 1.0	531	-
Salinity	ppt	2520 B	< 0.01	0.2	-
Total Dissolved Solids	mg/l	2540 C	< 50	285	41,360**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	6.3	-

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

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 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 36,360 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0795/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 11/04/2022	SAMPLING TIME	: 09.51
RECEIVED DATE	: 12/04/2022	ANALYTICAL DATE	: 12-19/04/2022
REPORT DATE	: 19/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_April

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD*
		METHODS	(non-detectable)	North Canal Point	
Temperature	°C	2550 B	< 0.5	34.0	≤ 40
pH	-	4500-H B	< 0.10	7.85	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	0.35	-
Conductivity	µS/cm	2510 B	< 1.0	452	-
Salinity	ppt	2520 B	< 0.01	0.1	-
Total Dissolved Solids	mg/l	2540 C	< 50	158	40,000**
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.7	-

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

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Technical Management Team

REG. NO. 7-239-n-5863

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 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station I) = 35,000 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0815/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 20/04/2022	SAMPLING TIME	: 09.25
RECEIVED DATE	: 21/04/2022	ANALYTICAL DATE	: 21-26/04/2022
REPORT DATE	: 27/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_April

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD*
		METHODS	(non-detectable)	North Canal Point	
Temperature	°C	2550 B	< 0.5	37.0	≤ 40
pH	-	4500-H B	< 0.10	8.07	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	0.71	-
Conductivity	µS/cm	2510 B	< 1.0	265	-
Salinity	ppt	2520 B	< 0.01	0.0	-
Total Dissolved Solids	mg/l	2540 C	< 50	174	41,600**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.2	-

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

Khemchuda Insom

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Analyst

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Technical Management Team

REG. NO. 7-239-n-5863

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 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station I) = 36,600 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 0873/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 27/04/2022 SAMPLING TIME : 10.20
RECEIVED DATE : 28/04/2022 ANALYTICAL DATE : 28/04/2022-05/05/2022
REPORT DATE : 06/05/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	33.9	≤ 40
pH	-	4500-H B	< 0.10	8.88	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	8.82	-
Conductivity	µS/cm	2510 B	< 1.0	787	-
Salinity	ppt	2520 B	< 0.01	0.3	-
Total Dissolved Solids	mg/l	2540 C	< 50	252	40,800**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	4.6	-

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

Khemchuda Insom

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Analyst

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Araya Tipparuk

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Technical Management Team

REG. NO. 3-239-N-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station I) = 35,800 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 0943/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 06/05/2022 SAMPLING TIME : 09.40
RECEIVED DATE : 07/05/2022 ANALYTICAL DATE : 07-14/05/2022
REPORT DATE : 17/05/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	35.3	≤ 40
pH	-	4500-H B	< 0.10	7.71	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	3.31	-
Conductivity	µS/cm	2510 B	< 1.0	861	-
Salinity	ppt	2520 B	< 0.01	0.4	-
Total Dissolved Solids	mg/l	2540 C	< 50	483	41,980**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	4.1	-

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

Khemchuda Insom

(Miss Khemchuda Insom)

Analyst

REG. NO. 3-239-N-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 3-239-N-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station I) = 36,980 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1001/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 11/05/2022 SAMPLING TIME : 09:29
RECEIVED DATE : 12/05/2022 ANALYTICAL DATE : 12-20/05/2022
REPORT DATE : 20/05/2022 SITE OPERATOR : Mr. Chanatip Singasomsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	33.5	≤ 40
pH		4500-H B	< 0.10	8.03	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	2.52	
Conductivity	µS/cm	2510 B	< 1.0	362	
Salinity	ppt	2520 B	< 0.01	0.1	
Total Dissolved Solids	mg/l	2540 C	< 50	181	40,500**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.8	

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 2nd ED. 2017 (AWWA-APHA-WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 35,760 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1059/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 18/05/2022 SAMPLING TIME : 09:37
RECEIVED DATE : 19/05/2022 ANALYTICAL DATE : 19-28/05/2022
REPORT DATE : 31/05/2022 SITE OPERATOR : Mr. Aniwat Pimwanna
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	33.7	≤ 40
pH		4500-H B	< 0.10	8.21	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	0.60	
Conductivity	µS/cm	2510 B	< 1.0	364	
Salinity	ppt	2520 B	< 0.01	0.1	
Total Dissolved Solids	mg/l	2540 C	< 50	163	40,500**
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	2.6	≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	4.5	

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 2nd ED. 2017 (AWWA-APHA-WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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 3. * Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 35,500 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 1059/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 18/05/2022	SAMPLING TIME	: 09.37
RECEIVED DATE	: 19/05/2022	ANALYTICAL DATE	: 19-24/05/2022
REPORT DATE	: 31/05/2022	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0009	≤ 0.25
Iron (Fe)	mg/l	3120 B	< 0.004	< 0.05	-
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 0.2
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005
Selenium (Se)	mg/l	3114 C	< 0.0005	ND	≤ 0.02

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 22ND ED. 2017 (APHA, APCA, WEF)

Krisana Chanthoom

(Miss Krisana Chanthoom)

Analyst

REG.NO.2-239-R-7862

(Mrs. Araya Tipparuk)

Technical Management Team

REG.NO.2-239-R-5863

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

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

3. *Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and

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

4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 1059/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 18/05/2022	SAMPLING TIME	: 09.37
RECEIVED DATE	: 19/05/2022	ANALYTICAL DATE	: 23, 26-27/05/2022
REPORT DATE	: 31/05/2022	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD
Total Petroleum Hydrocarbon					
- C ₆ -C ₉	µg/l	5030C/8260D	< 9.00	ND	-
- C ₁₀ -C ₁₄	µg/l	3510C/8015D	< 15.00	ND	-
- C ₁₅ -C ₂₈	µg/l	3510C/8015D	< 35.00	ND	-
- C ₂₉ -C ₃₆	µg/l	3510C/8015D	< 20.00	ND	-

REFERENCE : United States Environmental Protection Agency , SW-846 1st edition, US EPA 2020.

Miss Narisa Ponwasanetch

(Miss Narisa Ponwasanetch)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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

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3. *Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1127/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 25/05/2022 SAMPLING TIME : 09.53
RECEIVED DATE : 26/05/2022 ANALYTICAL DATE : 26-31/05/2022
REPORT DATE : 01/06/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550-B	< 0.5	35.5	≤ 40
pH	-	4500-H B	< 0.10	8.42	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	0.46	-
Conductivity	µS/cm	2510 B	< 1.0	310	-
Salinity	ppt	2520 B	< 0.01	0.1	-
Total Dissolved Solids	mg/l	2540 C	< 50	153	44,040**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.0	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

- Remark : 1. Reported analysis refers to submitted sample only.
2. This report shall not be reproduced, except in full, without official approval.
3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 39,040 mg/l).
5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1184/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 01/06/2022 SAMPLING TIME : 09.20
RECEIVED DATE : 02/06/2022 ANALYTICAL DATE : 02-07/06/2022
REPORT DATE : 08/06/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550-B	< 0.5	31.7	≤ 40
pH	-	4500-H B	< 0.10	8.68	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	1.20	-
Conductivity	µS/cm	2510 B	< 1.0	298	-
Salinity	ppt	2520 B	< 0.01	0.1	-
Total Dissolved Solids	mg/l	2540 C	< 50	186	38,860**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	6.1	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

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Technical Management Team

REG. NO. 2-239-ก-5863

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 33,860 mg/l).
5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 1249/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 08/06/2022	SAMPLING TIME	: 09.18
RECEIVED DATE	: 09/06/2022	ANALYTICAL DATE	: 09-14/06/2022
REPORT DATE	: 14/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				North Canal Point	
Temperature	°C	2550 B	< 0.5	32.6	≤ 40
pH	-	4500-H B	< 0.10	7.57	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	4.14	-
Conductivity	µS/cm	2510 B	< 1.0	656	-
Salinity	ppt	2520 B	< 0.01	0.3	-
Total Dissolved Solids	mg/l	2540 C	< 50	310	40,960**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.8	-

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

Khemchuda Insorn

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Analyst

REG. NO. 2-239-ก-5976

Araya Tipparak

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Technical Management Team

REG. NO. 2-239-ก-5863

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and
Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 35,960 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 1326/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 17/06/2022	SAMPLING TIME	: 14.07
RECEIVED DATE	: 18/06/2022	ANALYTICAL DATE	: 18-30/06/2022
REPORT DATE	: 28/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				North Canal Point	
Temperature	°C	2550 B	< 0.5	34.2	≤ 40
pH	-	4500-H B	< 0.10	8.60	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	1.32	-
Conductivity	µS/cm	2510 B	< 1.0	536	-
Salinity	ppt	2520 B	< 0.01	0.2	-
Total Dissolved Solids	mg/l	2540 C	< 50	296	41,460**
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	1.0	≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.7	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparak

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Technical Management Team

REG. NO. 2-239-ก-5863

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and
Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 36,460 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 1356/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 22/06/2022	SAMPLING TIME	: 09.15
RECEIVED DATE	: 23/06/2022	ANALYTICAL DATE	: 23-28/06/2022
REPORT DATE	: 29/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	32.3	≤ 40
pH	-	4500-H B	< 0.10	8.22	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	4.49	-
Conductivity	µS/cm	2510 B	< 1.0	612	-
Salinity	ppt	2520 B	< 0.01	0.5	-
Total Dissolved Solids	mg/l	2540 C	< 50	306	38,180**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	6.1	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-R-5976

Mrs. Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-R-5863

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station I) = 33,180 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 1389/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 29/06/2022	SAMPLING TIME	: 14.00
RECEIVED DATE	: 30/06/2022	ANALYTICAL DATE	: 30/06/2022-05/07/2022
REPORT DATE	: 06/07/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION North Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	35.4	≤ 40
pH	-	4500-H B	< 0.10	8.29	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	2.56	-
Conductivity	µS/cm	2510 B	< 1.0	427	-
Salinity	ppt	2520 B	< 0.01	0.1	-
Total Dissolved Solids	mg/l	2540 C	< 50	182	41,540**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.6	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-R-5976

Mrs. Araya Tipparuk

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Technical Management Team

REG. NO. 2-239-R-5863

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

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station I) = 36,540 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	0013/65
SAMPLING BY	SECOT Co., Ltd.	SAMPLING METHOD	Grab
SAMPLING DATE	05/01/2022	SAMPLING TIME	08.48
RECEIVED DATE	06/01/2022	ANALYTICAL DATE	06-12/01/2022
REPORT DATE	13/01/2022	SITE OPERATOR	Mr. Chanatip Singkasemsak
SAMPLE CONDITION	Normal	FILE CODE	222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				South Canal Point	
Temperature	°C	2550 B	< 0.5	36.3	≤ 40
pH	*	4500-H B	< 0.10	7.96	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	2.43	*
Conductivity	µS/cm	2510 B	< 1.0	683	*
Salinity	ppt	2520 B	< 0.01	0.3	*
Total Dissolved Solids	mg/l	2540 C	< 50	414	40,220**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	6.4	*

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG.NO.7-239-ก-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station I) = 35,220 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	0058/65
SAMPLING BY	SECOT Co., Ltd.	SAMPLING METHOD	Grab
SAMPLING DATE	12/01/2022	SAMPLING TIME	09.27
RECEIVED DATE	13/01/2022	ANALYTICAL DATE	13-19/01/2022
REPORT DATE	20/01/2022	SITE OPERATOR	Mr. Chanatip Singkasemsak
SAMPLE CONDITION	Normal	FILE CODE	222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				South Canal Point	
Temperature	°C	2550 B	< 0.5	37.4	≤ 40
pH	*	4500-H B	< 0.10	7.93	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	1.85	*
Conductivity	µS/cm	2510 B	< 1.0	566	*
Salinity	ppt	2520 B	< 0.01	0.2	*
Total Dissolved Solids	mg/l	2540 C	< 50	368	40,520**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.9	*

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG.NO.7-239-ก-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station I) = 35,520 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0101/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 19/01/2022	SAMPLING TIME	: 09.35
RECEIVED DATE	: 20/01/2022	ANALYTICAL DATE	: 20-25/01/2022
REPORT DATE	: 26/01/2022	SITE OPERATOR	: Mr. Watcharakon Prunakhaic
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550	< 0.5	35.1	≤ 40
pH	-	4500-H B	< 0.10	7.91	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	2.00	-
Conductivity	µS/cm	2510 B	< 1.0	432	-
Salinity	ppt	2520 B	< 0.01	0.1	-
Total Dissolved Solids	mg/l	2540 C	< 50	200	41,700**
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	6.0	≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.3	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21ST ED. 2017 IAWWA APHA WEF

Khemchuda Jansom

(Miss Khemchuda Jansom)

Analyst

REG. NO. 7-239-B-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-B-5863

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

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3. * Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water

(TDS value of the receiving water (Station 1) = 36,700 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0101/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 19/01/2022	SAMPLING TIME	: 09.35
RECEIVED DATE	: 20/01/2022	ANALYTICAL DATE	: 20-24/01/2022
REPORT DATE	: 26/01/2022	SITE OPERATOR	: Mr. Watcharakon Prunakhaic
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0015	≤ 0.25
Iron (Fe)	mg/l	3120 B	< 0.004	0.08	-
Lead (Pb)	mg/l	3120 B	< 0.008	0.04	≤ 0.2
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005
Selenium (Se)	mg/l	3114 C	< 0.0005	ND	≤ 0.02

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21ST ED. 2017 IAWWA APHA WEF

Krisana Chanthoom

(Miss Krisana Chanthoom)

Analyst

REG. NO. 7-239-B-7802

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-B-5863

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

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

3. * Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).

4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0101/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 19/01/2022	SAMPLING TIME	: 09.35
RECEIVED DATE	: 20/01/2022	ANALYTICAL DATE	: 20-24/01/2022
REPORT DATE	: 26/01/2022	SITE OPERATOR	: Mr. Watcharakon Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD
Total Petroleum Hydrocarbon					
- C ₆ -C ₉	µg/l	5030C/8260D	< 9.00	ND	*
- C ₁₀ -C ₁₄	µg/l	3510C/8015D	< 15.00	ND	*
- C ₁₅ -C ₂₀	µg/l	3510C/8015D	< 35.00	ND	*
- C ₂₀ -C ₃₆	µg/l	3510C/8015D	< 20.00	ND	*

REFERENCE : United States Environmental Protection Agency, SW-846, 3rd edition, U.S.EPA, 2020.

Naimee Poowasanpetch

(Miss Narisa Poowasanpetch)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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

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

3. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0122/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 26/01/2022	SAMPLING TIME	: 09.55
RECEIVED DATE	: 27/01/2022	ANALYTICAL DATE	: 27/01/2022-01/02/2022
REPORT DATE	: 02/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	37.5	≤ 40
pH		4500-H ⁺ B	< 0.10	7.33	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	8.32	*
Conductivity	µS/cm	2510 B	< 1.0	756	*
Salinity	ppt	2520 B	< 0.01	0.3	*
Total Dissolved Solids	mg/l	2540 C	< 50	408	42,020**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	4.6	*

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 3-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG.NO.3-239-ก-5863

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

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 37,020 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) **REQUEST SERVICE No.** : 0160/65
SAMPLING BY : SECOT Co., Ltd. **SAMPLING METHOD** : Grab
SAMPLING DATE : 02/02/2022 **SAMPLING TIME** : 10.00
RECEIVED DATE : 03/02/2022 **ANALYTICAL DATE** : 03-09/02/2022
REPORT DATE : 10/02/2022 **SITE OPERATOR** : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal **FILE CODE** : 222051_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	36.2	≤ 40
pH	-	4500-H B	< 0.10	7.98	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	8.85	-
Conductivity	µS/cm	2510 B	< 1.0	529	-
Salinity	ppt	2520 B	< 0.01	0.2	-
Total Dissolved Solids	mg/l	2540 C	< 50	212	39,860**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.7	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-A-5976

Araya Tippiaruk

(Mrs. Araya Tippiaruk)

Technical Management Team

REG.NO. 7-239-A-5863

- Remark :**
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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 34,860 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) **REQUEST SERVICE No.** : 0251/65
SAMPLING BY : SECOT Co., Ltd. **SAMPLING METHOD** : Grab
SAMPLING DATE : 09/02/2022 **SAMPLING TIME** : 09.45
RECEIVED DATE : 10/02/2022 **ANALYTICAL DATE** : 10-17/02/2022
REPORT DATE : 17/02/2022 **SITE OPERATOR** : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal **FILE CODE** : 222051_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	35.9	≤ 40
pH	-	4500-H B	< 0.10	8.19	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	4.20	-
Conductivity	µS/cm	2510 B	< 1.0	468	-
Salinity	ppt	2520 B	< 0.01	0.2	-
Total Dissolved Solids	mg/l	2540 C	< 50	258	41,700**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.5	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-A-5976

Araya Tippiaruk

(Mrs. Araya Tippiaruk)

Technical Management Team

REG.NO. 7-239-A-5863

- Remark :**
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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 36,700 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0309/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 17/02/2022	SAMPLING TIME	: 09.40
RECEIVED DATE	: 18/02/2022	ANALYTICAL DATE	: 18-24/02/2022
REPORT DATE	: 25/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	38.0	≤ 40
pH	-	4500-H B	< 0.10	8.85	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	6.62	-
Conductivity	µS/cm	2510 B	< 1.0	1,063	-
Salinity	ppt	2520 B	< 0.01	0.5	-
Total Dissolved Solids	mg/l	2540 C	< 50	648	40,700**
Total Suspended Solids	mg/l	2540 D	< 5	16	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	1.5	≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	4.8	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-5863

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 35,700 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0351/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 23/02/2022	SAMPLING TIME	: 09.35
RECEIVED DATE	: 24/02/2022	ANALYTICAL DATE	: 24/02/2022-02/03/2022
REPORT DATE	: 02/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	34.8	≤ 40
pH	-	4500-H B	< 0.10	7.74	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	16.67	-
Conductivity	µS/cm	2510 B	< 1.0	1,228	-
Salinity	ppt	2520 B	< 0.01	0.6	-
Total Dissolved Solids	mg/l	2540 C	< 50	650	38,780**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.4	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-5976

Araya Tipparuk

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Technical Management Team

REG. NO. 7-239-ก-5863

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

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 33,780 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 0411/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 02/03/2022 SAMPLING TIME : 10.00
RECEIVED DATE : 03/03/2022 ANALYTICAL DATE : 03-10/03/2022
REPORT DATE : 10/03/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	38.6	≤ 40
pH	-	4500-H B	< 0.10	7.96	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	15.27	-
Conductivity	µS/cm	2510 B	< 1.0	639	-
Salinity	ppt	2520 B	< 0.01	0.3	-
Total Dissolved Solids	mg/l	2540 C	< 50	402	40,920**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	4.9	-

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

Khemchuda Inorn
(Miss Khemchuda Inorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk
(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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

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3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water

(TDS value of the receiving water (Station I) = 35,920 mg/l).

5. - Not available.



บริษัท ซีคอต จำกัด
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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 0486/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 09/03/2022 SAMPLING TIME : 09.25
RECEIVED DATE : 10/03/2022 ANALYTICAL DATE : 10-16/03/2022
REPORT DATE : 17/03/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	34.7	≤ 40
pH	-	4500-H B	< 0.10	6.29	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	2.80	-
Conductivity	µS/cm	2510 B	< 1.0	635	-
Salinity	ppt	2520 B	< 0.01	0.3	-
Total Dissolved Solids	mg/l	2540 C	< 50	536	40,260**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.5	-

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

Khemchuda Inorn
(Miss Khemchuda Inorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk
(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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

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

3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water

(TDS value of the receiving water (Station I) = 35,260 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0541/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 16/03/2022	SAMPLING TIME	: 09.15
RECEIVED DATE	: 17/03/2022	ANALYTICAL DATE	: 17-22/03/2022
REPORT DATE	: 23/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	36.3	≤ 40
pH	-	4500-H B	< 0.10	7.44	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	3.79	-
Conductivity	µS/cm	2510 B	< 1.0	781	-
Salinity	ppt	2520 B	< 0.01	0.3	-
Total Dissolved Solids	mg/l	2540 C	< 50	540	42,580**
Total Suspended Solids	mg/l	2540 D	< 5	9	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.2	-

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

Khemchuda Insorn

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Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station I) = 37,580 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0602/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 23/03/2022	SAMPLING TIME	: 09.15
RECEIVED DATE	: 24/03/2022	ANALYTICAL DATE	: 24-29/03/2022
REPORT DATE	: 30/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	31.7	≤ 40
pH	-	4500-H B	< 0.10	7.12	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	4.65	-
Conductivity	µS/cm	2510 B	< 1.0	941	-
Salinity	ppt	2520 B	< 0.01	0.5	-
Total Dissolved Solids	mg/l	2540 C	< 50	560	42,800**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.6	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

- Remark :**
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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station I) = 37,580 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 0662/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 30/03/2022 SAMPLING TIME : 09.36
RECEIVED DATE : 31/03/2022 ANALYTICAL DATE : 31/03/2022-07/04/2022
REPORT DATE : 18/04/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	39.7	≤ 40
pH		4500-H B	< 0.10	8.09	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	2.54	
Conductivity	µS/cm	2510 B	< 1.0	508	
Salinity	ppt	2520 B	< 0.01	0.1	
Total Dissolved Solids	mg/l	2540 C	< 50	398	39,940**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	4.8	

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-5976

Araya Tippasuk

(Mrs. Araya Tippasuk)

Technical Management Team

REG. NO. 7-239-ก-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station I) = 34,940 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 0697/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 04/04/2022 SAMPLING TIME : 10.10
RECEIVED DATE : 05/04/2022 ANALYTICAL DATE : 05-12/04/2022
REPORT DATE : 18/04/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	36.7	≤ 40
pH		4500-H B	< 0.10	8.05	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	4.92	
Conductivity	µS/cm	2510 B	< 1.0	713	
Salinity	ppt	2520 B	< 0.01	0.2	
Total Dissolved Solids	mg/l	2540 C	< 50	396	41,360**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.7	

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

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Araya Tippasuk

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Technical Management Team

REG. NO. 7-239-ก-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station I) = 36,360 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0795/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 11/04/2022	SAMPLING TIME	: 09.37
RECEIVED DATE	: 12/04/2022	ANALYTICAL DATE	: 12-19/04/2022
REPORT DATE	: 19/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	34.4	≤ 40
pH		4500-H B	< 0.10	7.88	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	0.92	-
Conductivity	µS/cm	2510 B	< 1.0	457	-
Salinity	ppt	2520 B	< 0.01	0.1	-
Total Dissolved Solids	mg/l	2540 C	< 50	224	40,000**
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.2	-

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

Khemchuda Insorn
(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tippasuk
(Mrs. Araya Tippasuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 35,000 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0815/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 20/04/2022	SAMPLING TIME	: 09.36
RECEIVED DATE	: 21/04/2022	ANALYTICAL DATE	: 21-26/04/2022
REPORT DATE	: 27/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	35.0	≤ 40
pH		4500-H B	< 0.10	7.57	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	8.74	-
Conductivity	µS/cm	2510 B	< 1.0	687	-
Salinity	ppt	2520 B	< 0.01	0.3	-
Total Dissolved Solids	mg/l	2540 C	< 50	528	41,600**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	2.8	-

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

Khemchuda Insorn
(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tippasuk
(Mrs. Araya Tippasuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 36,600 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 0873/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 27/04/2022 SAMPLING TIME : 10.27
RECEIVED DATE : 28/04/2022 ANALYTICAL DATE : 28/04/2022-05/05/2022
REPORT DATE : 06/05/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				South Canal Point	
Temperature	°C	2550 B	< 0.5	37.6	< 40
pH		4500-H B	< 0.10	8.26	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	1.51	
Conductivity	µS/cm	2510 B	< 1.0	542	
Salinity	ppt	2520 B	< 0.01	0.2	
Total Dissolved Solids	mg/l	2540 C	< 50	310	40,800**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.4	

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 2011 (AWWA APHA WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-N-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-N-5863

- Remark :**
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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 35,800 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 0943/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 06/05/2022 SAMPLING TIME : 09.47
RECEIVED DATE : 07/05/2022 ANALYTICAL DATE : 07-14/05/2022
REPORT DATE : 17/05/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				South Canal Point	
Temperature	°C	2550 B	< 0.5	36.1	≤ 40
pH		4500-H B	< 0.10	7.72	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	2.68	
Conductivity	µS/cm	2510 B	< 1.0	713	
Salinity	ppt	2520 B	< 0.01	0.3	
Total Dissolved Solids	mg/l	2540 C	< 50	445	41,980**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	4.6	

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 2011 (AWWA APHA WEF)

Khemchuda Insorn

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Analyst

REG. NO. 2-239-N-5976

Araya Tipparuk

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Technical Management Team

REG. NO. 2-239-N-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station 1) = 36,980 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 1001/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 11/05/2022	SAMPLING TIME	: 09.38
RECEIVED DATE	: 12/05/2022	ANALYTICAL DATE	: 12-20/05/2022
REPORT DATE	: 20/05/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	37.4	≤ 40
pH		4500-H B	< 0.10	7.61	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	2.56	-
Conductivity	µS/cm	2510 B	< 1.0	717	-
Salinity	ppt	2520 B	< 0.01	0.2	-
Total Dissolved Solids	mg/l	2540 C	< 50	398	40,760**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.2	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

(Mrs. Araya Tipparuk)

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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

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

3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and

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

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water

(TDS value of the receiving water (Station 1) = 35,760 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 1059/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 18/05/2022	SAMPLING TIME	: 09.44
RECEIVED DATE	: 19/05/2022	ANALYTICAL DATE	: 19-28/05/2022
REPORT DATE	: 31/05/2022	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550	< 0.5	37.4	≤ 40
pH		4500-H B	< 0.10	8.60	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	1.23	-
Conductivity	µS/cm	2510 B	< 1.0	676	-
Salinity	ppt	2520 B	< 0.01	0.3	-
Total Dissolved Solids	mg/l	2540 C	< 50	443	40,500**
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	1.3	≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.9	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

(Mrs. Araya Tipparuk)

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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

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3. * Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and

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

4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water

(TDS value of the receiving water (Station 1) = 35,500 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1059/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 18/05/2022 SAMPLING TIME : 09.44
RECEIVED DATE : 19/05/2022 ANALYTICAL DATE : 19-24/05/2022
REPORT DATE : 31/05/2022 SITE OPERATOR : Mr. Aniwat Pimwanna
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD
Arsenic (As)	mg/l	3114 C	< 0.0001	0.0065	≤ 0.25
Iron (Fe)	mg/l	3120 B	< 0.004	0.07	-
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 0.2
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005
Selenium (Se)	mg/l	3114 C	< 0.0005	ND	≤ 0.02

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

(Miss Krisana Chanthoom)

Analyst

REG.NO. 2-239-9-7802

(Mrs. Araya Tipparuk)

Technical Management Team

REG.NO. 2-239-9-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. *Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1059/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 18/05/2022 SAMPLING TIME : 09.44
RECEIVED DATE : 19/05/2022 ANALYTICAL DATE : 23, 26-27/05/2022
REPORT DATE : 31/05/2022 SITE OPERATOR : Mr. Aniwat Pimwanna
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD
Total Petroleum Hydrocarbon					
- C ₆ -C ₉	µg/l	5030C/8260D	< 9.00	ND	-
- C ₁₀ -C ₁₄	µg/l	3510C/8015D	< 15.00	ND	-
- C ₁₅ -C ₂₈	µg/l	3510C/8015D	< 35.00	ND	-
- C ₂₉ -C ₃₆	µg/l	3510C/8015D	< 20.00	ND	-

REFERENCE : United States Environmental Protection Agency, SW-846, 3rd edition, US EPA 2020.

(Miss Narisa Poowasanpetch)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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 3. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1249/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 08/06/2022 SAMPLING TIME : 09.23
RECEIVED DATE : 09/06/2022 ANALYTICAL DATE : 09-14/06/2022
REPORT DATE : 14/06/2022 SITE OPERATOR : Mr. Chanatip Singkasomsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	39.2	≤ 40
pH	-	4500-H ¹ B	< 0.10	7.74	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	1.47	-
Conductivity	μS/cm	2510 B	< 1.0	648	-
Salinity	ppt	2520 B	< 0.01	0.3	-
Total Dissolved Solids	mg/l	2540 C	< 50	444	40,960**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.0	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

Technical Management Team

REG. NO. 2-239-ก-5863

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 35,960 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1302/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 15/06/2022 SAMPLING TIME : 13.40
RECEIVED DATE : 16/06/2022 ANALYTICAL DATE : 16-25/06/2022
REPORT DATE : 28/06/2022 SITE OPERATOR : Mr. Chanatip Singkasomsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	35.5	≤ 40
pH	-	4500-H ¹ B	< 0.10	8.14	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	8.84	-
Conductivity	μS/cm	2510 B	< 1.0	1,052	-
Salinity	ppt	2520 B	< 0.01	0.7	-
Total Dissolved Solids	mg/l	2540 C	< 50	836	41,460**
Total Suspended Solids	mg/l	2540 D	< 5	34	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.5	-

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

Khemchuda Insorn

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Analyst

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Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 36,460 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1127/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 25/05/2022 SAMPLING TIME : 10.00
RECEIVED DATE : 26/05/2022 ANALYTICAL DATE : 26-31/05/2022
REPORT DATE : 01/06/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	36.9	≤ 40
pH	-	4500-H B	< 0.10	7.88	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	1.42	-
Conductivity	µS/cm	2510 B	< 1.0	800	-
Salinity	ppt	2520 B	< 0.01	0.3	-
Total Dissolved Solids	mg/l	2540 C	< 50	424	44,040**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	6.3	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 39,040 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1184/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 01/06/2022 SAMPLING TIME : 09.35
RECEIVED DATE : 02/06/2022 ANALYTICAL DATE : 02-07/06/2022
REPORT DATE : 08/06/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION South Canal Point	STANDARD*
Temperature	°C	2550 B	< 0.5	36.6	≤ 40
pH	-	4500-H B	< 0.10	7.88	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	3.57	-
Conductivity	µS/cm	2510 B	< 1.0	554	-
Salinity	ppt	2520 B	< 0.01	0.3	-
Total Dissolved Solids	mg/l	2540 C	< 50	432	38,860**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.7	-

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 33,860 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1356/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 22/06/2022 SAMPLING TIME : 09.25
RECEIVED DATE : 23/06/2022 ANALYTICAL DATE : 23-28/06/2022
REPORT DATE : 29/06/2022 SITE OPERATOR : Mr. Chanatip Singkasemak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				South Canal Point	
Temperature	°C	2550 B	< 0.5	34.0	≤ 40
pH	-	4500-H B	< 0.10	8.12	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	1.74	-
Conductivity	µS/cm	2510 B	< 1.0	1,525	-
Salinity	ppt	2520 B	< 0.01	0.9	-
Total Dissolved Solids	mg/l	2540 C	< 50	1,028	33,180**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.7	-

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

Khemchuda Insom

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Analyst

REG. NO. 7-239-N-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station I) = 33,180 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1389/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 29/06/2022 SAMPLING TIME : 09.05
RECEIVED DATE : 30/06/2022 ANALYTICAL DATE : 30/06/2022-05/07/2022
REPORT DATE : 06/07/2022 SITE OPERATOR : Mr. Chanatip Singkasemak
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD*
				South Canal Point	
Temperature	°C	2550 B	< 0.5	35.4	≤ 40
pH	-	4500-H B	< 0.10	8.02	5.5-9.0
Turbidity	NTU	2130 B	< 0.02	1.09	-
Conductivity	µS/cm	2510 B	< 1.0	2,453	-
Salinity	ppt	2520 B	< 0.01	1.3	-
Total Dissolved Solids	mg/l	2540 C	< 50	1,548	41,540**
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.2	-

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

Khemchuda Insom

(Miss Khemchuda Insom)

Analyst

REG. NO. 7-239-N-5976

Araya Tipparuk

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Technical Management Team

REG. NO. 7-239-N-5863

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 3. * Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. ** The standard value is not more than 5,000 mg/l exceed TDS of receiving water
(TDS value of the receiving water (Station I) = 36,540 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd. (Phase 3)	REQUEST SERVICE No.:	0066/65
SAMPLING BY	: Glow SPP 3 Co., Ltd. (Phase 3)	SAMPLING METHOD	: Grab
SAMPLING DATE	: 12/01/2022	SAMPLING TIME	: -
RECEIVED DATE	: 13/01/2022	ANALYTICAL DATE	: 13-18/01/2022
REPORT DATE	: 18/01/2022	SITE OPERATOR	: *
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION New RO System	STANDARD ^v
Temperature	°C	2550 B	< 0.5	24.4	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.16	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 50	156	40,520 ^{2v}
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG.NO.7-239-ก-5863

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

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3. ^v Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).

4. ^{2v} The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 35,520 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd. (Phase 3)	REQUEST SERVICE No.:	0066/65
SAMPLING BY	: Glow SPP 3 Co., Ltd. (Phase 3)	SAMPLING METHOD	: Grab
SAMPLING DATE	: 12/01/2022	SAMPLING TIME	: -
RECEIVED DATE	: 13/01/2022	ANALYTICAL DATE	: 13-18/01/2022
REPORT DATE	: 18/01/2022	SITE OPERATOR	: *
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Neutralization No.2	STANDARD ^v
Temperature	°C	2550	< 0.5	24.2	≤ 40
pH	-	4500-H ⁺ B	< 0.10	6.64	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 50	3,696	40,520 ^{2v}
Total Suspended Solids	mg/l	2540 D	< 5	38	≤ 50

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-5976

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3. ^v Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).

4. ^{2v} The standard value is not more than 5,000 mg/l exceed TDS of receiving water (TDS value of the receiving water (Station 1) = 35,520 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. (Phase 3) REQUEST SERVICE No. : 0311/65
SAMPLING BY : Glow SPP 3 Co., Ltd. (Phase 3) SAMPLING METHOD : Grab
SAMPLING DATE : 10/02/2022 SAMPLING TIME : -
RECEIVED DATE : 18/02/2022 ANALYTICAL DATE : 18-24/02/2022
REPORT DATE : 25/02/2022 SITE OPERATOR : -
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				New RO System	
Temperature	°C	2550 B	< 0.5	28.4	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.54	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 50	544	41,700 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50

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

Khemchuda Inorn

(Miss Khemchuda Inorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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

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3. ^{1/} Notification of the Ministry of Natural Resources and Environment, B.E.2559 (2016) and

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

4. ^{2/} The standard value is not more than 5,000 mg/l exceed TDS of receiving water

(TDS value of the receiving water (Station 1) = 36,700 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. (Phase 3) REQUEST SERVICE No. : 0311/65
SAMPLING BY : Glow SPP 3 Co., Ltd. (Phase 3) SAMPLING METHOD : Grab
SAMPLING DATE : 10/02/2022 SAMPLING TIME : -
RECEIVED DATE : 18/02/2022 ANALYTICAL DATE : 18-24/02/2022
REPORT DATE : 25/02/2022 SITE OPERATOR : -
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Neutralization No.2	
Temperature	°C	2550	< 0.5	28.4	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.00	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 50	1,930	41,700 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 5	6	≤ 50

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

Khemchuda Inorn

(Miss Khemchuda Inorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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

4. ^{2/} The standard value is not more than 5,000 mg/l exceed TDS of receiving water

(TDS value of the receiving water (Station 1) = 36,700 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. (Phase 3) REQUEST SERVICE No. : 0496/65
SAMPLING BY : Glow SPP 3 Co., Ltd. (Phase 3) SAMPLING METHOD : Grab
SAMPLING DATE : 08/03/2022 SAMPLING TIME : -
RECEIVED DATE : 10/03/2022 ANALYTICAL DATE : 10-15/03/2022
REPORT DATE : 16/03/2022 SITE OPERATOR : -
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				New RO System	
Temperature	°C	2550 B	< 0.5	27.1	≤ 40
pH	-	4500-H B	< 0.10	7.37	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 50	3,960	40,260 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 5	< 5	< 50

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

Khonduda Insom

(Miss Khonduda Insom)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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

4. ^{2/} The standard value is not more than 5,000 mg/l exceed TDS of receiving water

(TDS value of the receiving water (Station I) = 35,260 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. (Phase 3) REQUEST SERVICE No. : 0496/65
SAMPLING BY : Glow SPP 3 Co., Ltd. (Phase 3) SAMPLING METHOD : Grab
SAMPLING DATE : 08/03/2022 SAMPLING TIME : -
RECEIVED DATE : 10/03/2022 ANALYTICAL DATE : 10-15/03/2022
REPORT DATE : 16/03/2022 SITE OPERATOR : -
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD ^{1/}
				Neutralization No.2	
Temperature	°C	2550	< 0.5	27.2	≤ 40
pH	-	4500-H B	< 0.10	8.09	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 50	354	40,260 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50

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

Khonduda Insom

(Miss Khonduda Insom)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-5863

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

4. ^{2/} The standard value is not more than 5,000 mg/l exceed TDS of receiving water

(TDS value of the receiving water (Station I) = 35,260 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd. (Phase 3)	REQUEST SERVICE No.	: 0797/65
SAMPLING BY	: Glow SPP 3 Co., Ltd. (Phase 3)	SAMPLING METHOD	: Grab
SAMPLING DATE	: 11/04/2022	SAMPLING TIME	: 10.10
RECEIVED DATE	: 12/04/2022	ANALYTICAL DATE	: 12-19/04/2022
REPORT DATE	: 19/04/2022	SITE OPERATOR	: -
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION New RO System	STANDARD ^{1/}
Temperature	°C	2550 B	< 0.5	26.5	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.89	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 50	742	40,000 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50

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

Khemchuda Insorn
(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk
(Mrs. Araya Tipparuk)

Technical Management Team

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

4. ^{2/} The standard value is not more than 5,000 mg/l exceed TDS of receiving water

(TDS value of the receiving water (Station I) = 35,000 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd. (Phase 3)	REQUEST SERVICE No.	: 0797/65
SAMPLING BY	: Glow SPP 3 Co., Ltd. (Phase 3)	SAMPLING METHOD	: Grab
SAMPLING DATE	: 11/04/2022	SAMPLING TIME	: 10.05
RECEIVED DATE	: 12/04/2022	ANALYTICAL DATE	: 12-19/04/2022
REPORT DATE	: 19/04/2022	SITE OPERATOR	: -
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Neutralization No.2	STANDARD ^{1/}
Temperature	°C	2550	< 0.5	26.4	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.64	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 50	2,506	40,000 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50

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

Khemchuda Insorn
(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk
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Technical Management Team

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4. ^{2/} The standard value is not more than 5,000 mg/l exceed TDS of receiving water

(TDS value of the receiving water (Station I) = 35,000 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. (Phase 3) REQUEST SERVICE No. : 1071/65
SAMPLING BY : Glow SPP 3 Co., Ltd. (Phase 3) SAMPLING METHOD : Grab
SAMPLING DATE : 17/05/2022 SAMPLING TIME : *
RECEIVED DATE : 19/05/2022 ANALYTICAL DATE : 19-25/05/2022
REPORT DATE : 25/05/2022 SITE OPERATOR : *
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION New RO System	STANDARD ¹⁾
Temperature	°C	2550 B	< 0.5	24.5	≤ 40
pH	-	4500-H ²⁾ B	< 0.10	7.99	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 50	780	40,500 ²⁾
Total Suspended Solids	mg/l	2540 D	< 5	< 5	< 50

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tippasuk

(Mrs. Araya Tippasuk)

Technical Management Team

REG.NO.2-239-ก-5863

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4. ²⁾ The standard value is not more than 5,000 mg/l exceed TDS of receiving water

(TDS value of the receiving water (Station 1) = 35,500 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. (Phase 3) REQUEST SERVICE No. : 1071/65
SAMPLING BY : Glow SPP 3 Co., Ltd. (Phase 3) SAMPLING METHOD : Grab
SAMPLING DATE : 17/05/2022 SAMPLING TIME : *
RECEIVED DATE : 19/05/2022 ANALYTICAL DATE : 19-25/05/2022
REPORT DATE : 25/05/2022 SITE OPERATOR : *
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Neutralization No.2	STANDARD ¹⁾
Temperature	°C	2550	< 0.5	25.0	≤ 40
pH	-	4500-H ²⁾ B	< 0.10	7.75	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 50	4,485	40,500 ²⁾
Total Suspended Solids	mg/l	2540 D	< 5	7	< 50

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tippasuk

(Mrs. Araya Tippasuk)

Technical Management Team

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4. ²⁾ The standard value is not more than 5,000 mg/l exceed TDS of receiving water

(TDS value of the receiving water (Station 1) = 35,500 mg/l).

5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. (Phase 3) REQUEST SERVICE No. : 1251/65
SAMPLING BY : Glow SPP 3 Co., Ltd. (Phase 3) SAMPLING METHOD : Grab
SAMPLING DATE : 07/06/2022 SAMPLING TIME : *
RECEIVED DATE : 09/06/2022 ANALYTICAL DATE : 09-14/06/2022
REPORT DATE : 14/06/2022 SITE OPERATOR : *
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_June

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ^{1/}
		METHODS	(non-detectable)	New RO System	
Temperature	°C	2550 B	< 0.5	24.8	< 40
pH	-	4500-H ¹ B	< 0.10	7.83	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 50	866	40,960 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 5	< 5	< 50

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

Khemchuda Insorn
(Miss Khemchuda Insorn)

Analyst

REG. NO. 3-239-ก-5976

Araya Tippanuk
(Mrs. Araya Tippanuk)

Technical Management Team

REG. NO. 3-239-ก-5863

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 4. ^{2/} The standard value is not more than 5,000 mg/l exceed TDS of receiving water.
(TDS value of the receiving water (Station 1) = 35,960 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. (Phase 3) REQUEST SERVICE No. : 1251/65
SAMPLING BY : Glow SPP 3 Co., Ltd. (Phase 3) SAMPLING METHOD : Grab
SAMPLING DATE : 07/06/2022 SAMPLING TIME : *
RECEIVED DATE : 09/06/2022 ANALYTICAL DATE : 09-14/06/2022
REPORT DATE : 14/06/2022 SITE OPERATOR : *
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_June

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ^{1/}
		METHODS	(non-detectable)	Neutralization No.2	
Temperature	°C	2550	< 0.5	25.6	< 40
pH	-	4500-H ¹ B	< 0.10	7.24	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 50	3,746	40,960 ^{2/}
Total Suspended Solids	mg/l	2540 D	< 5	< 5	< 50

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

Khemchuda Insorn
(Miss Khemchuda Insorn)

Analyst

REG. NO. 3-239-ก-5976

Araya Tippanuk
(Mrs. Araya Tippanuk)

Technical Management Team

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 4. ^{2/} The standard value is not more than 5,000 mg/l exceed TDS of receiving water.
(TDS value of the receiving water (Station 1) = 35,960 mg/l).
 5. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0101/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 19/01/2022	SAMPLING TIME	: 09.55
RECEIVED DATE	: 20/01/2022	ANALYTICAL DATE	: 20-25/01/2022
REPORT DATE	: 26/01/2022	SITE OPERATOR	: Mr. Watcharakan Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Run off Pond	STANDARD*
pH	-	4500-H B	< 0.10	7.67	5.5-9.0
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 D	< 40.00	< 40.00	≤ 120

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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3. *Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.(Phase 3)	REQUEST SERVICE No.	: 0101/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 19/01/2022	SAMPLING TIME	: 09.55
RECEIVED DATE	: 20/01/2022	ANALYTICAL DATE	: 20-24/01/2022
REPORT DATE	: 26/01/2022	SITE OPERATOR	: Mr. Watcharakan Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Run off Pond	STANDARD*
Arsenic (As)	mg/l	3114 C	< 0.0001	ND	≤ 0.25
Iron (Fe)	mg/l	3120 B	< 0.004	< 0.05	-
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 0.2
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005
Selenium (Se)	mg/l	3114 C	< 0.0005	ND	≤ 0.02

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

Krisana Chantoom

(Miss Krisana Chantoom)

Analyst

REG. NO. 7-239-ก-7802

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ก-5863

- Remark : 1. Reported analysis refers to submitted sample only.
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3. * Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
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 : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 0101/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 19/01/2022 SAMPLING TIME : 09.55
RECEIVED DATE : 20/01/2022 ANALYTICAL DATE : 20-24/01/2022
REPORT DATE : 26/01/2022 SITE OPERATOR : Mr. Watcharakon Pramakhate
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Run off Pond	STANDARD
Total Petroleum Hydrocarbon					
-C ₆ -C ₉	µg/l	5010C/8260D	< 9.00	ND	-
-C ₁₀ -C ₁₄	µg/l	3510C/8015D	< 15.00	ND	-
-C ₁₅ -C ₂₀	µg/l	3510C/8015D	< 35.00	ND	-
-C ₂₁ -C ₃₄	µg/l	3510C/8015D	< 20.00	ND	-

REFERENCE : United States Environmental Protection Agency, SW-846, 3rd edition, US EPA 2020.

Maim Poowasanetch

(Miss Narisa Poowasanetch)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1059/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 18/05/2022 SAMPLING TIME : 10.01
RECEIVED DATE : 19/05/2022 ANALYTICAL DATE : 19-28/05/2022
REPORT DATE : 31/05/2022 SITE OPERATOR : Mr. Aniwat Pimwanna
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Run off Pond	STANDARD*
pH		4500-H ⁺ B	< 0.10	7.18	5.5-9.0
Total Suspended Solids	mg/l	2540 D	< 5	< 5	≤ 50
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 D	< 40.00	< 40.00	≤ 120

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG.NO.2-239-ก-5863

- Remark : 1. Reported analysis refers to submitted sample only.
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3. *Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1059/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 18/05/2022 SAMPLING TIME : 10.01
RECEIVED DATE : 19/05/2022 ANALYTICAL DATE : 19-24/05/2022
REPORT DATE : 31/05/2022 SITE OPERATOR : Mr. Aniwat Pinwanna
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Run off Pond	STANDARD*
Arsenic (As)	mg/l	3114 C	< 0.0001	< 0.0005	≤ 0.25
Iron (Fe)	mg/l	3120 B	< 0.004	< 0.05	•
Lead (Pb)	mg/l	3120 B	< 0.008	ND	≤ 0.2
Mercury (Hg)	mg/l	3112 B	< 0.0005	ND	≤ 0.005
Selenium (Se)	mg/l	3114 C	< 0.0005	ND	≤ 0.02

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

(Miss Krisana Chanthoom)

Analyst

REG.NO.3-239-ก-7802

(Mrs. Araya Tipparuk)

Technical Management Team

REG.NO.3-239-ก-5863

- Remark :
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 3. ^v Notification of Ministry of Natural Resources and Environment, B.E.2559 (2016) and Notification of the Ministry of Industry, B.E.2560 (2017).
 4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd.(Phase 3) REQUEST SERVICE No. : 1059/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 18/05/2022 SAMPLING TIME : 10.01
RECEIVED DATE : 19/05/2022 ANALYTICAL DATE : 23, 26-27/05/2022
REPORT DATE : 31/05/2022 SITE OPERATOR : Mr. Aniwat Pinwanna
SAMPLE CONDITION : Normal FILE CODE : 222051_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Run off Pond	STANDARD
Total Petroleum Hydrocarbon					
- C ₆ -C ₉	µg/l	5030C/8260D	< 9.00	ND	•
- C ₁₀ -C ₁₄	µg/l	3510C/8015D	< 15.00	ND	•
- C ₁₅ -C ₂₈	µg/l	3510C/8015D	< 35.00	ND	•
- C ₂₉ -C ₃₆	µg/l	3510C/8015D	< 20.00	ND	•

REFERENCE : United States Environmental Protection Agency, SW-846, 3rd edition, U.S. EPA 2020.

(Miss Norisa Poowasanpetch)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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ระดับเสียงภายในสถานประกอบการ

MTR-Glow SPP 3

Time	Equivalent Sound Pressure Level (dB(A))		
	Feb 11, 2022	Feb 12, 2022	Feb 13, 2022
00:00 - 01:00			
01:00 - 02:00			
02:00 - 03:00			
03:00 - 04:00			
04:00 - 05:00			
05:00 - 06:00			
06:00 - 07:00			
07:00 - 08:00			
08:00 - 09:00			
09:00 - 10:00			
10:00 - 11:00			
11:00 - 12:00	84.6	85.2	84.8
12:00 - 13:00	84.6	85.4	84.8
13:00 - 14:00	84.6	85.4	84.7
14:00 - 15:00	84.6	85.5	84.7
15:00 - 16:00	84.6	85.4	84.6
16:00 - 17:00	84.6	85.4	84.7
17:00 - 18:00	84.6	85.4	84.7
18:00 - 19:00	84.6	85.1	84.8
19:00 - 20:00			
20:00 - 21:00			
21:00 - 22:00			
22:00 - 23:00			
23:00 - 24:00			
Leq(8)*	84.6	85.4	84.7
Lmax **	92.2	92.4	91.9
Standard-8Hr	90 dB(A)		
Standard-Max	140 dB(A)		

Suk Suddimanon
(Miss Sununta Sirawattinanon)
Technical Management Team



MTR-Glow SPP 3

Time	Equivalent Sound Pressure Level (dB(A))		
	Feb 11, 2022	Feb 12, 2022	Feb 13, 2022
00:00 - 01:00			
01:00 - 02:00			
02:00 - 03:00			
03:00 - 04:00			
04:00 - 05:00			
05:00 - 06:00			
06:00 - 07:00			
07:00 - 08:00			
08:00 - 09:00			
09:00 - 10:00			
10:00 - 11:00			
11:00 - 12:00	84.3	84.9	84.3
12:00 - 13:00	84.3	84.9	84.0
13:00 - 14:00	84.1	84.5	84.1
14:00 - 15:00	84.1	84.5	84.0
15:00 - 16:00	84.1	84.3	84.0
16:00 - 17:00	84.2	84.5	84.2
17:00 - 18:00	84.2	84.4	84.2
18:00 - 19:00	84.1	84.5	84.4
19:00 - 20:00			
20:00 - 21:00			
21:00 - 22:00			
22:00 - 23:00			
23:00 - 24:00			
L_{eq}(8)*	84.2	84.6	84.2
L_{max}**	97.7	99.8	95.7
Standard-8Hr	90 dB(A)		
Standard-Max	140 dB(A)		

Sue Sirawattinanon
(Miss Sununta Sirawattinanon)
Technical Management Team



Noise Monitoring Result : Working Noise MTR-Glow SPP 3

Location : Between PA Fan and SA Fan (Hybrid CFB 3) Monitor Period : 11-13 Feb 2022
SLM Model : Cirrus CR162B Serial No : G300833
Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Cirrus CR-515 Serial No : 94296
Calibration Ref dB(A) : 93.80 Certified Date : Dec 24, 2021
SLM Reading / Adjust dB(A) : 93.7/0.1 Expire Date : Dec 23, 2022
Cal Sheet No.: CR-515-2022-005

Time	Equivalent Sound Pressure Level (dB(A))		
	Feb 11, 2022	Feb 12, 2022	Feb 13, 2022
00:00 - 01:00			
01:00 - 02:00			
02:00 - 03:00			
03:00 - 04:00			
04:00 - 05:00			
05:00 - 06:00			
06:00 - 07:00			
07:00 - 08:00			
08:00 - 09:00			
09:00 - 10:00			
10:00 - 11:00			
11:00 - 12:00	82.5	82.3	82.6
12:00 - 13:00	82.5	82.7	82.8
13:00 - 14:00	82.5	82.8	83.0
14:00 - 15:00	82.6	82.6	83.0
15:00 - 16:00	82.7	82.5	83.3
16:00 - 17:00	82.7	82.6	82.9
17:00 - 18:00	83.0	82.5	83.5
18:00 - 19:00	83.1	82.3	83.4
19:00 - 20:00			
20:00 - 21:00			
21:00 - 22:00			
22:00 - 23:00			
23:00 - 24:00			
Leq(8)*	82.7	82.5	83.1
Lmax **	88.0	88.0	85.8
Standard-8Hr	90 dB(A)		
Standard-Max	140 dB(A)		

Remark : * Average time between 11:00-19:00

** Maximum Sound Pressure Level between 11:00-19:00

(Miss Katesarin Vorraderwitaya)
Environmental Scientist

(Miss Sununta Sirawuttinanon)
Technical Management Team



Noise Monitoring Result : Working Noise MTR-Glow SPP3

Location : Between PA Fan and SA Fan (Hybrid CFB 1) Monitor Period : 17-20 Jun 2022
SLM Model : RION NL-21 Serial No : 00487734
Site Operator : Mr. Chanatip Singkasemsak

Calibrator Model : RION NC-74 Serial No : 34283648
Calibration Ref dB(A) : 94.0 Certified Date : Dec 24 2021
SLM Reading / Adjust dB(A) : 94.0/0.0 Expire Date : Dec 23 2022
Cal Sheet No.: NC-74-2022-064

Time	Equivalent Sound Pressure Level (dB(A))		
	Jun 17, 2022	Jun 18, 2022	Jun 19, 2022
00:00 - 01:00			
01:00 - 02:00			
02:00 - 03:00			
03:00 - 04:00			
04:00 - 05:00			
05:00 - 06:00			
06:00 - 07:00			
07:00 - 08:00			
08:00 - 09:00			
09:00 - 10:00	74.4	74.4	73.5
10:00 - 11:00	74.5	74.6	73.0
11:00 - 12:00	73.8	73.3	71.5
12:00 - 13:00	74.2	73.7	72.3
13:00 - 14:00	74.6	77.3	74.8
14:00 - 15:00	75.4	74.8	76.4
15:00 - 16:00	75.1	74.2	75.8
16:00 - 17:00	73.7	73.7	74.0
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)*	74.5	74.7	74.7
Lmax **	102.9	104.2	103.9
Standard-8Hr	90 dB(A)		
Standard-Max	140 dB(A)		

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

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

(Miss Katesarin Vorraderwitaya)
Environmental Scientist

(Miss Sununta Sirawuttinanon)
Technical Management Team



Noise Monitoring Result : Working Noise MTR-Glow SPP3

Location : Between PA Fan and SA Fan (Hybrid CFB 2)

Monitor Period : 17-20 Jun 2022

SLM Model : RION NL-21

Serial No : 00187505

Site Operator : Mr. Chanatip Singkasemsak

Calibrator Model : RION NC-74

Serial No : 34283648

Calibration Ref dB(A) : 94.0

Certified Date : Dec 24 2021

SLM Reading / Adjust dB(A) : 94.1/-0.1

Expire Date : Dec 23 2022

Cal Sheet No.: NC-74-2022-064

Time	Equivalent Sound Pressure Level (dB(A))		
	Jun 17, 2022	Jun 18, 2022	Jun 19, 2022
00:00 - 01:00			
01:00 - 02:00			
02:00 - 03:00			
03:00 - 04:00			
04:00 - 05:00			
05:00 - 06:00			
06:00 - 07:00			
07:00 - 08:00			
08:00 - 09:00			
09:00 - 10:00	84.9	85.1	84.7
10:00 - 11:00	84.9	85.0	84.3
11:00 - 12:00	84.6	84.4	84.4
12:00 - 13:00	84.5	84.3	84.5
13:00 - 14:00	84.9	84.2	84.4
14:00 - 15:00	85.0	84.4	84.2
15:00 - 16:00	85.0	84.6	84.4
16:00 - 17:00	84.9	84.3	84.6
17:00 - 18:00			
18:00 - 19:00			
19:00 - 20:00			
20:00 - 21:00			
21:00 - 22:00			
22:00 - 23:00			
23:00 - 24:00			
Leq(8)*	84.8	84.5	84.4
Lmax**	93.3	89.9	89.5
Standard-8Hr	90 dB(A)		
Standard-Max	140 dB(A)		

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

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Sununta Sirawuttinanon)
Technical Management Team



Noise Monitoring Result : Working Noise MTR-Glow SPP3

Location : Between PA Fan and SA Fan (Hybrid CFB 3)

Monitor Period : 17-20 Jun 2022

SLM Model : RION NL-21

Serial No : 00187497

Site Operator : Mr. Chanatip Singkasemsak

Calibrator Model : RION NC-74

Serial No : 34283648

Calibration Ref dB(A) : 94.0

Certified Date : Dec 24 2021

SLM Reading / Adjust dB(A) : 94.2/-0.2

Expire Date : Dec 23 2022

Cal Sheet No.: NC-74-2022-064

Time	Equivalent Sound Pressure Level (dB(A))		
	Jun 17, 2022	Jun 18, 2022	Jun 19, 2022
00:00 - 01:00			
01:00 - 02:00			
02:00 - 03:00			
03:00 - 04:00			
04:00 - 05:00			
05:00 - 06:00			
06:00 - 07:00			
07:00 - 08:00			
08:00 - 09:00			
09:00 - 10:00			
10:00 - 11:00	82.9	82.8	82.5
11:00 - 12:00	82.9	83.0	82.5
12:00 - 13:00	82.7	82.9	82.5
13:00 - 14:00	82.6	84.1	82.4
14:00 - 15:00	82.6	83.0	82.7
15:00 - 16:00	82.2	83.4	83.1
16:00 - 17:00	82.7	83.0	82.8
17:00 - 18:00	82.7	82.8	82.5
18:00 - 19:00			
19:00 - 20:00			
20:00 - 21:00			
21:00 - 22:00			
22:00 - 23:00			
23:00 - 24:00			
Leq(8)*	82.7	83.1	82.6
Lmax**	91.1	99.8	86.2
Standard-8Hr	90 dB(A)		
Standard-Max	140 dB(A)		

Remark : * Average time between 10:00-18:00

** Maximum Sound Pressure Level between 10:00-18:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Sununta Sirawuttinanon)
Technical Management Team

ระดับเสียงทั่วไป



Noise Monitoring Result : Community Noise MTR-Glow SPP3

Location : Fence of Project Site
SLM Model : RION NL-21
Site Operator : Mr. Siwanon Kulawong

Monitor Period : 11-16 Mar 2022
Serial No : 00487719

Calibrator Model : RION NC-74
Calibration Ref dB(A) : 94.0
SLM Reading / Adjust dB(A) : 93.9/0.1
Cal Sheet No.: NC-74-2022-025

Serial No : 34283648
Certified Date : Dec 24 2021
Expire Date : Dec 23 2022

Time	Equivalent Sound Pressure Level (dB(A))				
	11-12 Mar 2022	12-13 Mar 2022	13-14 Mar 2022	14-15 Mar 2022	15-16 Mar 2022
12:00 ~ 13:00	58.0	57.2	55.2	57.0	55.2
13:00 ~ 14:00	59.3	58.1	55.6	58.8	56.1
14:00 ~ 15:00	63.4	77.3	55.1	60.2	56.0
15:00 ~ 16:00	58.8	57.7	55.4	58.2	56.8
16:00 ~ 17:00	58.0	57.9	55.3	57.3	57.1
17:00 ~ 18:00	58.0	58.2	55.3	56.9	56.6
18:00 ~ 19:00	57.8	57.3	55.6	56.3	57.9
19:00 ~ 20:00	57.0	56.8	54.3	55.6	55.4
20:00 ~ 21:00	57.3	56.3	54.4	55.0	55.4
21:00 ~ 22:00	57.2	56.4	54.6	55.2	54.8
22:00 ~ 23:00	57.3	56.7	54.5	55.4	55.1
23:00 ~ 00:00	58.3	56.6	55.0	55.6	54.9
00:00 ~ 01:00	56.6	56.5	54.7	55.9	55.0
01:00 ~ 02:00	56.5	55.8	54.5	56.1	55.1
02:00 ~ 03:00	56.7	55.6	54.3	54.9	55.0
03:00 ~ 04:00	56.9	55.4	54.1	55.9	55.4
04:00 ~ 05:00	56.8	55.5	54.0	56.4	55.0
05:00 ~ 06:00	57.2	56.0	54.5	56.0	55.4
06:00 ~ 07:00	57.1	56.9	55.1	56.3	55.6
07:00 ~ 08:00	56.7	56.2	55.6	56.1	55.8
08:00 ~ 09:00	58.6	56.6	57.6	56.3	58.5
09:00 ~ 10:00	62.9	59.6	58.7	60.1	57.5
10:00 ~ 11:00	57.8	64.0	58.9	56.5	56.0
11:00 ~ 12:00	57.5	64.6	56.7	56.4	56.0
Leq(24)*	58.4	64.6	55.6	57.0	56.0
Ldn	63.8	66.3	61.2	63.0	61.8
Lmax **	84.9	95.8	71.2	77.3	82.7
Standard-24Hr	70 dB(A)				
Standard-Max	115 dB(A)				

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

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise MTR-Glow SPP3

Location : Fence of Project Site
SLM Model : RION NL-21
Site Operator : Mr. Siwanon Kulawong

Monitor Period : 11-16 Mar 2022
Serial No : 00487719

Calibrator Model : RION NC-74
Calibration Ref dB(A) : 94.0
SLM Reading / Adjust dB(A) : 93.9/0.1
Cal Sheet No.: NC-74-2022-025

Serial No : 34283648
Certified Date : Dec 24 2021
Expire Date : Dec 23 2022

Time	L90 (dB(A))				
	11-12 Mar 2022	12-13 Mar 2022	13-14 Mar 2022	14-15 Mar 2022	15-16 Mar 2022
12:00 ~ 13:00	56.9	56.2	54.0	55.2	54.3
13:00 ~ 14:00	57.2	56.5	54.3	56.5	54.8
14:00 ~ 15:00	57.3	56.7	54.0	57.1	54.4
15:00 ~ 16:00	57.2	56.7	54.4	55.2	55.9
16:00 ~ 17:00	57.2	56.9	54.4	55.6	55.8
17:00 ~ 18:00	57.1	57.0	54.2	55.1	54.9
18:00 ~ 19:00	56.6	56.2	53.9	55.0	54.8
19:00 ~ 20:00	56.3	56.0	53.7	54.5	54.4
20:00 ~ 21:00	56.4	55.3	53.8	54.3	54.4
21:00 ~ 22:00	56.4	55.2	53.9	54.3	54.1
22:00 ~ 23:00	56.5	55.6	53.8	54.2	54.3
23:00 ~ 00:00	56.8	55.3	54.1	54.1	54.2
00:00 ~ 01:00	55.6	55.4	53.9	53.9	54.2
01:00 ~ 02:00	55.9	55.2	53.8	53.8	54.3
02:00 ~ 03:00	56.1	55.0	53.6	53.6	54.2
03:00 ~ 04:00	56.0	54.9	53.4	54.1	54.3
04:00 ~ 05:00	55.9	55.0	53.4	54.0	54.1
05:00 ~ 06:00	55.9	55.3	53.9	54.3	54.4
06:00 ~ 07:00	55.9	55.5	54.0	54.3	54.5
07:00 ~ 08:00	55.6	55.4	54.0	54.2	54.8
08:00 ~ 09:00	55.7	55.6	56.3	54.4	55.1
09:00 ~ 10:00	56.6	55.8	57.2	55.1	55.9
10:00 ~ 11:00	56.5	55.3	56.3	54.9	54.8
11:00 ~ 12:00	56.4	54.0	55.1	55.0	54.7
L90(avg)*	56.4	55.7	54.4	54.8	54.7

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise MTR-Glow SPP3

Location : Ban Nong Feab		Monitor Period : 11-16 Mar 2022			
SLM Model : RION NL-21		Serial No : 00187515			
Site Operator : Mr. Siwanon Kulawong					
Calibrator Model : RION NC-74		Serial No : 34283648			
Calibration Ref dB(A) : 94.0		Certified Date : Dec 24 2021			
SLM Reading / Adjust dB(A) : 94.1/-0.1		Expire Date : Dec 23 2022			
Cal Sheet No.: NC-74-2022-025					
Time	Equivalent Sound Pressure Level (dB(A))				
	11-12 Mar 2022	12-13 Mar 2022	13-14 Mar 2022	14-15 Mar 2022	15-16 Mar 2022
13:00 - 14:00	58.2	58.3	54.9	55.5	54.7
14:00 - 15:00	57.1	55.2	55.1	55.0	54.9
15:00 - 16:00	56.6	53.7	57.2	55.2	55.2
16:00 - 17:00	56.6	56.6	59.0	56.7	59.9
17:00 - 18:00	57.3	59.7	55.1	57.0	57.2
18:00 - 19:00	57.1	58.4	55.3	57.0	57.9
19:00 - 20:00	56.2	56.5	52.1	55.7	55.2
20:00 - 21:00	55.2	54.2	50.3	54.8	56.3
21:00 - 22:00	52.1	51.5	52.5	52.1	53.4
22:00 - 23:00	52.9	52.2	49.2	51.8	52.0
23:00 - 00:00	54.8	49.7	48.9	47.1	48.6
00:00 - 01:00	47.7	47.7	50.5	47.1	48.5
01:00 - 02:00	47.2	47.5	46.0	46.3	49.0
02:00 - 03:00	48.0	47.1	47.9	46.1	49.1
03:00 - 04:00	48.3	47.5	47.2	48.1	51.3
04:00 - 05:00	48.9	48.2	47.8	47.7	50.6
05:00 - 06:00	51.0	49.6	50.5	50.6	56.3
06:00 - 07:00	57.4	57.0	57.7	59.5	61.8
07:00 - 08:00	58.9	58.4	59.3	58.4	61.8
08:00 - 09:00	59.5	59.3	57.5	57.4	58.0
09:00 - 10:00	63.6	58.7	54.0	56.9	55.6
10:00 - 11:00	60.6	55.7	55.9	56.3	56.1
11:00 - 12:00	59.3	56.1	57.3	56.1	56.8
12:00 - 13:00	58.9	53.3	55.9	56.8	59.4
L _{eq} (24)*	57.1	55.5	54.8	55.1	56.6
L _{dn}	60.3	59.0	58.7	59.4	61.6
L _{max} **	82.6	82.7	80.8	82.5	85.5
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-Glow SPP3

Location : Ban Nong Feab		Monitor Period : 11-16 Mar 2022			
SLM Model : RION NL-21		Serial No : 00187515			
Site Operator : Mr. Siwanon Kulawong					
Calibrator Model : RION NC-74		Serial No : 34283648			
Calibration Ref dB(A) : 94.0		Certified Date : Dec 24 2021			
SLM Reading / Adjust dB(A) : 94.1/-0.1		Expire Date : Dec 23 2022			
Cal Sheet No.: NC-74-2022-025					
Time	L90 (dB(A))				
	11-12 Mar 2022	12-13 Mar 2022	13-14 Mar 2022	14-15 Mar 2022	15-16 Mar 2022
13:00 - 14:00	52.6	52.0	49.9	50.9	50.1
14:00 - 15:00	50.6	50.0	49.6	50.4	50.2
15:00 - 16:00	50.9	48.9	50.0	50.2	49.9
16:00 - 17:00	50.9	51.0	52.0	51.8	53.2
17:00 - 18:00	50.9	50.8	49.4	51.4	51.7
18:00 - 19:00	50.3	49.7	48.6	50.5	50.9
19:00 - 20:00	48.2	49.3	46.9	48.8	48.3
20:00 - 21:00	47.7	47.9	46.2	47.5	48.2
21:00 - 22:00	47.0	46.8	46.1	46.2	46.3
22:00 - 23:00	45.5	45.8	45.5	45.4	45.5
23:00 - 00:00	46.0	45.5	45.4	44.3	45.2
00:00 - 01:00	45.3	44.0	44.9	44.5	44.6
01:00 - 02:00	44.4	45.7	44.4	44.0	44.9
02:00 - 03:00	45.8	45.3	45.8	44.1	45.4
03:00 - 04:00	45.9	44.9	44.7	44.7	48.4
04:00 - 05:00	45.7	45.3	45.0	44.6	48.0
05:00 - 06:00	46.1	46.0	45.5	45.7	47.7
06:00 - 07:00	52.7	51.2	52.3	52.3	51.7
07:00 - 08:00	53.7	51.7	54.2	53.1	54.2
08:00 - 09:00	54.0	51.5	50.9	51.6	51.5
09:00 - 10:00	56.3	52.2	49.8	51.0	50.5
10:00 - 11:00	54.5	50.4	51.1	50.8	51.0
11:00 - 12:00	54.0	50.4	52.4	50.4	51.8
12:00 - 13:00	54.0	47.9	51.0	48.3	54.5
L90(avg)*	51.1	49.2	49.4	49.4	50.2

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-Glow SPP 3

Location : Fence of Project Site		Monitor Period : 17-22 Jun 2022			
SLM Model : RION NL-21		Serial No : 00487719			
Site Operator : Mr. Chanatip Singkasemsak					
Calibrator Model : RION NC-74		Serial No : 34283648			
Calibration Ref dB(A) : 94.0		Certified Date : 24 Dec 2021			
SLM Reading / Adjust dB(A) : 94.0/0.0		Expire Date : 23 Dec 2022			
Cal Sheet No.: NC-74-2022-066					
Time	Equivalent Sound Pressure Level (dB(A))				
	17-18 Jun 2022	18-19 Jun 2022	19-20 Jun 2022	20-21 Jun 2022	21-22 Jun 2022
09:00 - 10:00	63.7	63.2	60.5	62.0	60.9
10:00 - 11:00	63.8	62.4	60.9	62.2	61.6
11:00 - 12:00	63.3	63.3	63.5	63.7	61.1
12:00 - 13:00	63.5	63.6	61.3	63.8	60.9
13:00 - 14:00	63.0	60.3	60.7	63.3	61.3
14:00 - 15:00	63.0	60.9	60.1	63.5	60.7
15:00 - 16:00	62.5	61.1	60.4	63.0	60.1
16:00 - 17:00	62.0	60.5	63.2	63.0	60.4
17:00 - 18:00	62.2	60.9	62.4	62.5	60.5
18:00 - 19:00	60.5	63.3	63.3	62.0	60.3
19:00 - 20:00	60.9	63.5	63.6	62.2	60.9
20:00 - 21:00	63.5	63.0	63.6	62.7	61.1
21:00 - 22:00	61.3	63.0	62.8	64.1	60.5
22:00 - 23:00	60.7	62.5	62.4	65.0	60.9
23:00 - 00:00	60.1	62.0	61.2	65.1	63.5
00:00 - 01:00	60.4	62.2	60.9	64.9	61.3
01:00 - 02:00	60.5	62.7	61.6	63.2	60.7
02:00 - 03:00	62.0	64.1	61.1	62.4	60.1
03:00 - 04:00	62.2	65.0	60.9	63.3	60.4
04:00 - 05:00	62.7	65.1	61.3	63.6	60.5
05:00 - 06:00	64.1	60.5	60.7	63.6	60.3
06:00 - 07:00	65.0	60.3	63.0	62.8	60.9
07:00 - 08:00	65.1	60.9	63.0	62.4	61.1
08:00 - 09:00	64.9	61.1	62.5	61.2	60.5
Leq(24)*	62.8	62.5	62.0	63.3	60.9
L _{dn}	68.8	69.3	68.0	70.1	67.5
L _{max} **	83.3	72.3	83.3	72.3	83.3
Standard-24Hr	70 dB(A)				
Standard-Max	115 dB(A)				

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

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise MTR-Glow SPP 3

Location : Fence of Project Site		Monitor Period : 17-22 Jun 2022			
SLM Model : RION NL-21		Serial No : 00487719			
Site Operator : Mr. Chanatip Singkasemsak					
Calibrator Model : RION NC-74		Serial No : 34283648			
Calibration Ref dB(A) : 94.0		Certified Date : 24 Dec 2021			
SLM Reading / Adjust dB(A) : 94.0/0.0		Expire Date : 23 Dec 2022			
Cal Sheet No.: NC-74-2022-066					
Time	L90 (dB(A))				
	17-18 Jun 2022	18-19 Jun 2022	19-20 Jun 2022	20-21 Jun 2022	21-22 Jun 2022
09:00 - 10:00	61.7	61.5	58.4	60.4	58.7
10:00 - 11:00	61.6	60.4	59.1	60.7	60.1
11:00 - 12:00	61.2	62.0	59.9	61.7	59.1
12:00 - 13:00	61.2	62.0	59.6	61.6	58.9
13:00 - 14:00	61.3	57.9	58.2	61.2	58.6
14:00 - 15:00	61.6	58.8	58.0	61.2	58.2
15:00 - 16:00	60.7	59.1	58.2	61.3	58.0
16:00 - 17:00	60.4	58.4	61.5	61.6	58.2
17:00 - 18:00	60.7	59.1	60.4	60.7	59.2
18:00 - 19:00	58.4	61.2	62.0	60.4	57.9
19:00 - 20:00	59.1	61.2	62.0	60.7	58.8
20:00 - 21:00	59.9	61.3	62.5	60.9	59.1
21:00 - 22:00	59.6	61.6	61.4	62.9	58.4
22:00 - 23:00	58.2	60.7	60.6	63.1	59.1
23:00 - 00:00	58.0	60.4	59.7	63.3	59.9
00:00 - 01:00	58.2	60.7	58.7	63.0	59.6
01:00 - 02:00	59.2	60.9	60.1	61.5	58.2
02:00 - 03:00	60.4	62.9	59.1	60.4	58.0
03:00 - 04:00	60.7	63.1	58.9	62.0	58.2
04:00 - 05:00	60.9	63.3	59.6	62.0	59.2
05:00 - 06:00	62.9	59.2	58.2	62.5	57.9
06:00 - 07:00	63.1	57.9	61.3	61.4	58.8
07:00 - 08:00	63.3	58.8	61.6	60.6	59.1
08:00 - 09:00	63.0	59.1	60.7	59.7	58.4
L90(avg)*	60.9	60.8	60.2	61.6	58.8

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-Glow SPP 3

Location : Ban Nong Feab

Monitor Period : 17-22 Jun 2022

SLM Model : RION NL-21

Serial No : 00487723

Site Operator : Mr. Chanatip Singkasemsak

Calibrator Model : RION NC-74

Serial No : 34283648

Calibration Ref dB(A) : 94.0

Certified Date : 24 Dec 2021

SLM Reading / Adjust dB(A) : 94.0/0.0

Expire Date : 23 Dec 2022

Cal Sheet No.: NC-74-2022-066

Time	Equivalent Sound Pressure Level (dB(A))				
	17-18 Jun 2022	18-19 Jun 2022	19-20 Jun 2022	20-21 Jun 2022	21-22 Jun 2022
10:00 - 11:00	54.5	53.9	52.4	57.1	52.5
11:00 - 12:00	55.9	54.1	53.5	57.9	54.9
12:00 - 13:00	53.7	54.9	52.6	55.2	55.3
13:00 - 14:00	58.7	55.3	52.6	54.4	55.8
14:00 - 15:00	57.8	54.0	52.6	53.4	54.1
15:00 - 16:00	54.7	56.3	52.2	54.4	53.3
16:00 - 17:00	58.5	56.6	56.8	56.4	55.9
17:00 - 18:00	56.9	55.0	54.7	56.8	55.2
18:00 - 19:00	56.6	56.0	53.7	56.0	56.4
19:00 - 20:00	55.2	55.5	50.5	55.7	53.4
20:00 - 21:00	51.9	52.4	52.2	53.2	53.6
21:00 - 22:00	52.3	55.2	52.2	50.4	53.1
22:00 - 23:00	50.8	52.3	48.5	50.4	51.6
23:00 - 00:00	50.1	49.3	48.1	48.1	46.6
00:00 - 01:00	51.7	47.5	48.2	50.6	46.4
01:00 - 02:00	50.0	47.9	46.8	55.1	46.0
02:00 - 03:00	52.7	46.7	47.7	47.0	47.8
03:00 - 04:00	52.7	46.9	51.7	47.1	47.2
04:00 - 05:00	54.2	52.4	49.1	48.1	49.2
05:00 - 06:00	55.0	52.7	53.1	54.1	58.2
06:00 - 07:00	55.9	53.1	55.8	55.2	60.1
07:00 - 08:00	55.6	52.6	55.7	56.4	58.7
08:00 - 09:00	53.9	52.0	54.2	53.8	55.7
09:00 - 10:00	56.0	50.9	54.9	52.7	54.5
Leq(24)*	55.0	53.5	52.9	54.3	54.7
Ldn	60.0	57.8	57.9	58.9	60.4
Lmax**	83.5	85.4	78.8	84.7	80.3
Standard-24Hr	70 dB(A)				
Standard-Max	115 dB(A)				

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

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-Glow SPP 3

Location : Ban Nong Feab

Monitor Period : 17-22 Jun 2022

SLM Model : RION NL-21

Serial No : 00487723

Site Operator : Mr. Chanatip Singkasemsak

Calibrator Model : RION NC-74

Serial No : 34283648

Calibration Ref dB(A) : 94.0

Certified Date : 24 Dec 2021

SLM Reading / Adjust dB(A) : 94.0/0.0

Expire Date : 23 Dec 2022

Cal Sheet No.: NC-74-2022-066

Time	L90 (dB(A))				
	17-18 Jun 2022	18-19 Jun 2022	19-20 Jun 2022	20-21 Jun 2022	21-22 Jun 2022
10:00 - 11:00	48.9	49.1	46.7	49.5	47.6
11:00 - 12:00	50.7	48.8	47.8	50.7	49.0
12:00 - 13:00	49.4	49.0	46.9	49.3	48.4
13:00 - 14:00	50.4	49.6	46.2	48.8	48.7
14:00 - 15:00	50.3	49.2	47.0	49.1	49.2
15:00 - 16:00	49.9	50.2	47.1	48.8	48.4
16:00 - 17:00	51.6	50.0	49.0	50.0	49.1
17:00 - 18:00	50.3	49.8	48.3	50.8	49.3
18:00 - 19:00	49.6	50.8	47.8	50.1	49.7
19:00 - 20:00	48.4	50.2	45.2	48.4	47.8
20:00 - 21:00	47.6	48.3	45.7	46.9	47.0
21:00 - 22:00	47.8	47.4	45.4	46.1	46.1
22:00 - 23:00	47.0	46.9	46.0	46.3	45.1
23:00 - 00:00	46.7	46.8	45.7	45.7	43.6
00:00 - 01:00	47.1	45.2	45.0	44.6	43.0
01:00 - 02:00	46.9	45.4	44.3	47.2	43.9
02:00 - 03:00	47.2	43.8	44.9	44.2	45.2
03:00 - 04:00	50.3	43.9	43.5	45.4	44.6
04:00 - 05:00	50.1	44.5	44.1	45.1	46.7
05:00 - 06:00	51.6	46.9	46.8	46.9	48.2
06:00 - 07:00	52.6	47.8	50.6	49.5	53.4
07:00 - 08:00	50.9	47.9	49.8	51.5	52.2
08:00 - 09:00	49.1	46.8	49.7	48.1	49.9
09:00 - 10:00	48.6	46.6	49.9	47.6	49.0
L90(avg)*	49.6	48.1	47.3	48.4	48.5

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

ความร้อนภายในสถานประกอบการ



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพฯ 10800

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HEAT STRESS MEASUREMENT REPORT

CLIENT NAME	: GLOW SPP 3 Co., Ltd.	REFERENCE NO.	: 222051_Working/Heat/Jun
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Area Heat Stress Monitor
MEASUREMENT DATE	: 28/06/2022	MODEL NO.	: JT2011-E2A
MEASUREMENT LOCATION	: CFB Boiler Unit 1	SERIAL NO.	: 3522210180, 3522210172
SITE OPERATOR	: Miss Alisa Kaniwaranon		

LOCATION	TIME	MEASURED TEMPERATURE (°C)					STANDARD (°C) *
		NWB	DB	GT	WBGT _{In}	WBGT _{Avg}	
In front of Steam Generator Hall	10:12-10:42	28.3	33.7	33.8	30.0	31.3	34.0
CFB #1	10:42-11:12	27.7	32.2	32.8	29.2		
	11:12-11:42	29.6	39.4	40.1	32.8		
	11:42-12:12	29.9	39.6	40.3	33.0		
In front of CFB Boiler #1	10:16-10:46	27.7	31.6	31.9	29.0	28.9	34.0
	10:46-11:16	28.1	31.8	32.2	29.3		
	11:16-11:46	27.4	31.0	31.5	28.6		
	11:46-12:16	27.3	31.9	32.2	28.8		

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Sirawuttinanon)

Technical Management Team

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

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3. *WBGT Standard was notified by the Ministerial of Labor B.E.2559 (2016).

NWB = Natural Wet Bulb Temperature

DB = Dry Bulb Temperature

GT = Globe Temperature

WBGT = Wet Bulb Globe Temperature

Work Load : Light work load = 34.0 °C, Moderate work load = 32.0 °C and Heavy work load = 30.0 °C

ความเข้มของแสงสว่างภายในสถานประกอบการ



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

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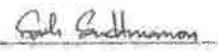
LIGHT INTENSITY MEASUREMENT REPORT

CLIENT NAME	: GLOW SPP 3 Co., Ltd. (Phase3)	REFERENCE NO.	: 222051_Light/Jun(1)
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Digital Light Meter
MEASUREMENT DATE	: 28/06/2022	MODEL	: Extech / 407026
MEASUREMENT LOCATION	: Working area	SERIAL NO.	: A.041100
SITE OPERATOR	: Miss Alisa Kaniwaranon		

LOCATION	TYPE OF WORK	TIME	LIGHT INTENSITY (LUX)	
			RESULT	STANDARD*
			DAYTIME	
MCR Building				
Laboratory (Floor 1)	Working of laboratory	10:24	669	400-500
Admin. Building				
Office Desk of Miss Chanaiporn	Working of document	11:20	549	400-500
Maintenance & Warehouse Building				
Workshop	Working and componanting	13:22	362	200-300


(Miss Katesarin Vorrudetwittaya)

Environmental Scientist


(Miss Sununta Sirawuttinanon)

Technical Management Team

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

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3. * Notification of the Department of Labour Protection and Welfare B.E.2561 (2018).



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LIGHT INTENSITY MEASUREMENT REPORT

CLIENT NAME	: GLOW SPP 3 Co., Ltd. (Phase3)	REFERENCE NO.	: 222051_Light/Jun(2)
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Digital Light Meter
MEASUREMENT DATE	: 28/06/2022	MODEL	: Extech / 407026
MEASUREMENT LOCATION	: Working area	SERIAL NO.	: A.041100
SITE OPERATOR	: Miss Alisa Kaniwaranon		

LOCATION	TYPE OF WORK	TIME	LIGHT INTENSITY (LUX)		
			RESULT DAYTIME		STANDARD*
			AVERAGE	MINIMUM	
Admin. Building					
Walk-way Floor 1 (Admin. Building)	Walk-ways inside building	11:23	212	158	≥100
CIG-1A Mark V Room					
Mark V. Room	Working of controlling	10:26	627	582	≥200
Maintenance & Warehouse Building					
Stock of Monitor Equipment Room	Working of monitoring	13:29	643	635	≥200


(Miss Katesarin Vorradetwittaya)

Environmental Scientist


(Miss Sununta Sirawuttinanon)

Technical Management Team

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LIGHT INTENSITY MEASUREMENT REPORT

CLIENT NAME : GLOW SPP 3 Co., Ltd. (Phase3) REFERENCE NO. : 222051_Light/Jun(3)
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Digital Light Meter
MEASUREMENT DATE : 28/06/2022 MODEL : Extech / 407026
MEASUREMENT LOCATION : Working area SERIAL NO. : A_041100
SITE OPERATOR : Miss Alisa Kaniwaranon

LOCATION	TYPE OF WORK	TIME	LIGHT INTENSITY (LUX)	
			RESULT NIGHTTIME	STANDARD*
MCR Building				
Laboratory (Floor 1)	Working of laboratory	19:27	589	400-500
Admin. Building				
Office Desk of Miss Chamaiporn	Working of document	19:43	535	400-500
Maintenance & Warehouse Building				
Workshop	Working and componanting	19:12	212	200-300

(Miss Katesarin Vorradetwitaya)

Environmental Scientist

(Miss Sununta Sirawuttinanon)

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LIGHT INTENSITY MEASUREMENT REPORT

CLIENT NAME : GLOW SPP 3 Co., Ltd. (Phase3) REFERENCE NO. : 222051_Light/Jun(4)
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Digital Light Meter
MEASUREMENT DATE : 28/06/2022 MODEL : Extech / 407026
MEASUREMENT LOCATION : Working area SERIAL NO. : A_041100
SITE OPERATOR : Miss Alisa Kaniwaranon

LOCATION	TYPE OF WORK	TIME	LIGHT INTENSITY (LUX)		
			RESULT NIGHTTIME		STANDARD
			AVERAGE	MINIMUM	
Admin. Building					
Walk-way Floor 1 (Admin. Building)	Walk-ways inside building	19:46	192	168	≥100
CIG-1A Mark V Room					
Mark V Room	Working of controlling	19:28	592	531	≥200
Maintenance & Warehouse Building					
Stock of Monitor Equipment Room	Working of monitoring	19:22	619	576	≥200

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Environmental Scientist

(Miss Sununta Sirawuttinanon)

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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	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0014/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 05/01/2022	SAMPLING TIME	: 09:39-11:14
RECEIVED DATE	: 06/01/2022	ANALYTICAL DATE	: 06-11/01/2022
REPORT DATE	: 11/01/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD*
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	28.4	28.0	30.0	28.4	28.5	-
pH	-	4500-H B	< 0.10	7.88	7.90	7.76	8.12	8.02	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	4.76	5.27	4.43	1.84	4.53	-
Conductivity	µS/cm	2510 B	< 1.0	49,100	49,900	50,000	49,900	49,000	-
Total Dissolved Solids	mg/l	2540 C	< 25	35,680	34,600	35,220	35,200	35,400	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	6.04	5.48	5.89	5.71	5.96	≥ 4.0

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 19TH ED. 2012 (AWWA APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparak

(Mrs. Araya Tipparak)

Technical Management Team

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 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ≥ Not less than.
 5. - Not available.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0014/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 05/01/2022	SAMPLING TIME	: 09:06-09:24
RECEIVED DATE	: 06/01/2022	ANALYTICAL DATE	: 06-11/01/2022
REPORT DATE	: 11/01/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	28.2	28.3	≤ 2**
pH	-	4500-H B	< 0.10	7.95	8.03	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	4.85	3.43	-
Conductivity	µS/cm	2510 B	< 1.0	50,000	49,800	-
Total Dissolved Solids	mg/l	2540 C	< 25	35,640	34,560	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.71	6.03	≥ 4.0

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 19TH ED. 2012 (AWWA APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparak

(Mrs. Araya Tipparak)

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 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ** ≤ 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance (natural condition) was 28.3 °C.
 5. ≥ Not less than.
 6. ≤ Not more than.
 7. - Not available.
 8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

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SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 05/01/2022	SAMPLING TIME	: 09.06-11.14
RECEIVED DATE	: 06/01/2022	ANALYTICAL DATE	: 05-06/01/2022
REPORT DATE	: 11/01/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021 **
Salinity	ppt	2520 B	A	33.7	≤ 10%	32.3
			B	33.1		32.3
			C	32.9		31.3
			D	33.1		32.2
			E	33.0		32.2
			I	33.0		32.3
			O	32.2		31.4

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 11TH ED. 2017 (AWWA APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparak

(Mrs. Araya Tipparak)

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 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ** The minimum value of salinity monitoring results in January 2021.
 5. ≤ 10% means change from the minimum value by not more than 10%.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0014/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 05/01/2022	SAMPLING TIME	: 09.06-11.14
RECEIVED DATE	: 05/01/2022	ANALYTICAL DATE	: 05/01/2022
REPORT DATE	: 11/01/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021 **
Transparency	m	Secchi Disc	A	2.0	≤ 10%	1.4
			B	2.0		1.5
			C	1.5		1.5
			D	2.0		1.5
			E	1.7		1.4
			I	2.5		2.1
			O	1.5		1.3

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 11TH ED. 2017 (AWWA APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparak

(Mrs. Araya Tipparak)

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 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0059/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 12/01/2022	SAMPLING TIME	: 09.34-09.52
RECEIVED DATE	: 13/01/2022	ANALYTICAL DATE	: 13-19/01/2022
REPORT DATE	: 20/01/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD*
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	30.3	30.4	30.2	30.5	29.7	-
pH	-	4500-H B	< 0.10	7.65	7.72	7.77	7.59	8.02	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	1.30	2.71	3.82	2.75	1.98	-
Conductivity	µS/cm	2510 B	< 1.0	51,000	51,000	50,900	50,800	47,400	-
Total Dissolved Solids	mg/l	2540 C	< 25	35,680	34,700	34,860	35,520	33,200	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.90	6.04	5.96	5.75	6.15	≥ 4.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 22nd ED. 2017 (APHA, AWWA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tippasuk

(Mrs. Araya Tippasuk)

Technical Management Team

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 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ≥ Not less than.
 5. - Not available.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0059/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 12/01/2022	SAMPLING TIME	: 09.57-10.10
RECEIVED DATE	: 13/01/2022	ANALYTICAL DATE	: 13-19/01/2022
REPORT DATE	: 20/01/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	30.4	30.0	≤ 2**
pH	-	4500-H B	< 0.10	7.79	8.02	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	2.55	1.64	-
Conductivity	µS/cm	2510 B	< 1.0	50,800	49,430	-
Total Dissolved Solids	mg/l	2540 C	< 25	35,000	33,640	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	6.22	6.33	≥ 4.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 22nd ED. 2017 (APHA, AWWA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tippasuk

(Mrs. Araya Tippasuk)

Technical Management Team

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 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ** ≤ 2 means change from natural condition not more than 2 °C; Temperature at 2,000 meter distance (natural condition) was 30.2 °C.
 5. ≥ Not less than.
 6. ≤ Not more than.
 7. - Not available.
 8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0059/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 12/01/2022	SAMPLING TIME	: 09.34-10.10
RECEIVED DATE	: 13/01/2022	ANALYTICAL DATE	: 12-13/01/2022
REPORT DATE	: 20/01/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Salinity	ppt	2520 B	A	33.8	≤ 10%	32.3
			B	33.6		32.3
			C	32.1		31.3
			D	33.8		32.2
			E	33.7		32.2
			I	33.6		32.3
			O	31.1		31.4

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

Khemchuda Insorn

(Miss Khenachuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 5. ≤ 10% means change from the minimum value by not more than 10%.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0059/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 12/01/2022	SAMPLING TIME	: 09.34-10.10
RECEIVED DATE	: 12/01/2022	ANALYTICAL DATE	: 12/01/2022
REPORT DATE	: 20/01/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Transparency	m	Secchi Disc	A	1.4	≤ 10%	1.4
			B	1.5		1.5
			C	2.0		1.5
			D	1.4		1.5
			E	1.6		1.4
			I	2.2		2.1
			O	1.5		1.3

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

Khemchuda Insorn

(Miss Khenchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 4. ** The minimum value of transparency monitoring results in January 2021.
 5. ≤ 10% means decrease from the natural condition by not more than 10% which were compared with the minimum value.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0102/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 19/01/2022	SAMPLING TIME	: 09.51-10.15
RECEIVED DATE	: 20/01/2022	ANALYTICAL DATE	: 20-25/01/2022
REPORT DATE	: 26/01/2022	SITE OPERATOR	: Mr. Aniwat Pimwanua
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD*
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	29.1	29.8	30.1	29.5	29.8	-
pH	-	4500-H B	< 0.10	8.11	8.04	8.12	8.06	7.98	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	4.81	5.19	4.39	3.08	5.86	-
Conductivity	µS/cm	2510 B	< 1.0	48,700	49,000	49,100	49,300	49,100	-
Total Dissolved Solids	mg/l	2540 C	< 25	37,080	36,600	37,020	36,700	36,120	-
Residual Chlorine	mg/l	4500-Cl G	< 0.01	ND	ND	ND	ND	ND	≤ 0.01
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	6.11	5.12	5.54	5.14	5.02	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ≥ Not less than.
 5. - Not available.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0102/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 19/01/2022	SAMPLING TIME	: 10.24-10.37
RECEIVED DATE	: 20/01/2022	ANALYTICAL DATE	: 20-25/01/2022
REPORT DATE	: 26/01/2022	SITE OPERATOR	: Mr. Aniwat Pimwanua
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	29.1	29.0	≤ 2 ^{uv}
pH	-	4500-H B	< 0.10	8.13	8.10	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	2.15	3.15	-
Conductivity	µS/cm	2510 B	< 1.0	49,000	48,900	-
Total Dissolved Solids	mg/l	2540 C	< 25	37,340	36,640	-
Residual Chlorine	mg/l	4500-Cl G	< 0.01	ND	ND	≤ 0.01
BOD ₅	mg/l	5210 B	< 1.0	1.4	1.1	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.30	5.81	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ** ≤ 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance (natural condition) was 29.4 °C.
 5. ≥ Not less than.
 6. ≤ Not more than.
 7. - Not available.
 8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 0102/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 19/01/2022 SAMPLING TIME : 09.51-10.37
RECEIVED DATE : 20/01/2022 ANALYTICAL DATE : 19-20/01/2022
REPORT DATE : 26/01/2022 SITE OPERATOR : Mr. Aniwat Pinwanna
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD ¹	THE MINIMUM VALUE IN THE YEAR 2021 ²
Salinity	ppt	2520 B	A	31.9	≤ 10%	32.3
			B	32.2		32.3
			C	32.1		31.3
			D	32.1		32.2
			E	32.2		32.2
			I	32.3		32.3
			O	32.1		31.4

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

Khemchuda Insom

(Miss Khemchuda Insom)

Analyst

Araya Tipparak

(Mrs. Araya Tipparak)

Technical Management Team

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2. This report shall not be reproduced, except in full, without official approval.
3. * Notification of the National Environment Board B.E.2564 (2021).
4. ** The minimum value of salinity monitoring results in January 2021.
5. ≤ 10% means change from the minimum value by not more than 10%.
6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 0102/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 19/01/2022 SAMPLING TIME : 09.51-10.37
RECEIVED DATE : 20/01/2022 ANALYTICAL DATE : 19/01/2022
REPORT DATE : 26/01/2022 SITE OPERATOR : Mr. Aniwat Pinwanna
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD ¹	THE MINIMUM VALUE IN THE YEAR 2021 ²
Transparency	m	Secchi Disc	A	1.5	≤ 10%	1.4
			B	1.6		1.5
			C	1.6		1.5
			D	1.4		1.5
			E	1.5		1.4
			I	2.0		2.1
			O	1.4		1.3

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

Khemchuda Insom

(Miss Khemchuda Insom)

Analyst

Araya Tipparak

(Mrs. Araya Tipparak)

Technical Management Team

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2. This report shall not be reproduced, except in full, without official approval.
3. * Notification of the National Environment Board B.E.2564 (2021).
4. ** The minimum value of transparency monitoring results in January 2021.
5. ≤ 10% means decrease from the natural condition by not more than 10% which were compared with the minimum value.
6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 0102/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 19/01/2022 SAMPLING TIME : 09.51-10.37
RECEIVED DATE : 20/01/2022 ANALYTICAL DATE : 20-21/01/2022
REPORT DATE : 26/01/2022 SITE OPERATOR : Mr. Aniwat Pimwanna
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD* (Avg.+SD.)**
Suspended Solid (SS)	mg/l	2540 D	A	7.75	12.22
			B	3.20	10.78
			C	5.88	11.64
			D	7.40	13.91
			E	7.28	13.03
			I	5.98	7.51
			O	8.96	17.94

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

(Mrs. Araya Tipparuk)

(Mrs. Araya Tipparuk)

Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. ***The results should not be changed by more than the sum of the yearly average and its Standard Deviation

(Yearly average of the year 2021 was calculated from monthly samples taken at equal time interval).

5. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 0102/65
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SAMPLING DATE : 19/01/2022 SAMPLING TIME : 09.51-10.37
RECEIVED DATE : 20/01/2022 ANALYTICAL DATE : 20-24/01/2022
REPORT DATE : 26/01/2022 SITE OPERATOR : Mr. Aniwat Pimwanna
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION							STANDARD*
				A	B	C	D	E	I	O	
Arsenic (As)	µg/l	3114 C	< 0.10	1.52	1.40	1.50	1.44	1.33	1.27	1.50	≤ 10
Iron (Fe)	µg/l	3120 B	< 50.00	ND	ND	ND	ND	ND	ND	ND	≤ 300
Lead (Pb)	µg/l	3113 B	< 3.00	ND	ND	ND	ND	ND	ND	ND	≤ 8.5
Mercury (Hg)	µg/l	3112 B	< 0.05	ND	ND	ND	ND	ND	ND	ND	≤ 0.1
Selenium (Se)	µg/l	3114 C	< 0.50	ND	ND	ND	ND	ND	ND	ND	-

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

Krisana Chanthoom

(Miss Krisana Chanthoom)

Analyst

(Mrs. Araya Tipparuk)

(Mrs. Araya Tipparuk)

Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. ≤ Not more than.

5. - Not available.

6. The natural condition was normal during sampling period.



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SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 19/01/2022	SAMPLING TIME	: 09.51-10.37
RECEIVED DATE	: 20/01/2022	ANALYTICAL DATE	: 20.24/01/2022
REPORT DATE	: 26/01/2022	SITE OPERATOR	: Mr. Anawat Pinwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	RESULT	STANDARD*
Total Petroleum Hydrocarbon (TPH)	µg/l	Pre-Concentration/ Fluorescence Spectrometric	< 0.25	A	ND	≤ 5
				B	ND	
				C	ND	
				D	ND	
				E	ND	
				I	ND	
				O	ND	

REFERENCE: INTERGOVERNMENTAL OCCASIONGRAPHIC COMMISSION OF UNESCO (IOCC 1981)

Naima Poowasanpetch
(Miss Naima Poowasanpetch)

Analyst

Araya Tipparuk
(Mrs. Araya Tipparuk)

Technical Management Team

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4. ≤ Not more than.

5. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0123/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 26/01/2022	SAMPLING TIME	: 10.00-12.10
RECEIVED DATE	: 27/01/2022	ANALYTICAL DATE	: 27/01/2022-01/02/2022
REPORT DATE	: 02/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD*
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	32.8	33.1	34.1	33.8	33.0	-
pH	-	4500-H ⁺ B	< 0.10	8.08	8.07	8.03	7.99	8.07	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	3.46	2.64	3.06	1.36	1.71	-
Conductivity	µS/cm	2510 B	< 1.0	49,100	50,600	49,800	49,800	49,400	-
Total Dissolved Solids	mg/l	2540 C	< 25	35,520	34,700	35,060	37,020	35,240	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.13	5.21	5.64	5.48	5.30	≥ 4.0

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

Khemchuda Insorn
(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk
(Mrs. Araya Tipparuk)

Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. ≥ Not less than.

5. - Not available.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0123/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 26/01/2022	SAMPLING TIME	: 10.10-10.25
RECEIVED DATE	: 27/01/2022	ANALYTICAL DATE	: 27/01/2022-01/02/2022
REPORT DATE	: 02/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	32.5	32.8	≤ 2**
pH	-	4500-H B	< 0.10	8.04	8.09	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	2.28	2.13	+
Conductivity	µS/cm	2510 B	< 1.0	50,300	49,700	+
Total Dissolved Solids	mg/l	2540 C	< 25	35,880	35,400	+
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.62	5.90	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

M. Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. ** ≤ 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance (natural condition) was 32.8 °C.

5. ≥ Not less than.

6. ≤ Not more than.

7. - Not available.

8. The natural condition was normal during sampling period.



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SAMPLING DATE	: 26/01/2022	SAMPLING TIME	: 10.00-12.10
RECEIVED DATE	: 27/01/2022	ANALYTICAL DATE	: 26-27/01/2022
REPORT DATE	: 02/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Salinity	ppt	2520 B	A	32.5	≤ 10%	32.3
			B	33.3		32.3
			C	32.1		31.3
			D	33.1		32.2
			E	32.0		32.2
			F	32.4		32.3
			O	32.6		31.4

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

M. Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. ** The minimum value of salinity monitoring results in January 2021.

5. ≤ 10% means change from the minimum value by not more than 10%.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

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SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 26/01/2022	SAMPLING TIME	: 10.00-12.10
RECEIVED DATE	: 26/01/2022	ANALYTICAL DATE	: 26/01/2022
REPORT DATE	: 02/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_January

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021**
Transparency	m	Secchi Disc	A	2.0	≤ 10%	1.4
			B	2.0		1.5
			C	2.2		1.5
			D	1.9		1.5
			E	1.8		1.4
			I	2.4		2.1
			O	2.1		1.3

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 19th ED. 2017 (AWWA APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

- Remark :
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 2. This report shall not be reproduced, except in full, without official approval.
 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ** The minimum value of transparency monitoring results in January 2021.
 5. ≤10% means decrease from the natural condition by not more than 10% which were compared with the minimum value.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0161/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 02/02/2022	SAMPLING TIME	: 09.30-10.35
RECEIVED DATE	: 03/02/2022	ANALYTICAL DATE	: 03-09/02/2022
REPORT DATE	: 10/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	31.4	31.9	31.5	31.7	31.2	*
pH		4500-H B	< 0.10	8.12	7.89	8.00	7.94	8.10	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	11.37	5.10	3.52	3.28	9.29	*
Conductivity	µS/cm	2510 B	< 1.0	50,940	50,200	50,050	50,750	49,320	*
Total Dissolved Solids	mg/l	2540 C	< 25	34,280	31,800	34,560	34,860	34,380	*
Dissolved Oxygen	mg/l	4500-O G	< 0.10	6.22	5.09	5.24	5.60	5.28	≥ 4.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 19th ED. 2017 (AWWA APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

- Remark :
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 2. This report shall not be reproduced, except in full, without official approval.
 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ≥ Not less than.
 5. - Not available.
 6. The natural condition was normal during sampling period.



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SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800

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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	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0161/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 02/02/2022	SAMPLING TIME	: 09.15-09.20
RECEIVED DATE	: 03/02/2022	ANALYTICAL DATE	: 03-09/02/2022
REPORT DATE	: 10/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD
				B	C	
Temperature	°C	2550 B	< 0.5	31.5	31.4	≤ 2 **
pH		4500-H B	< 0.10	7.90	8.01	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	4.51	8.52	*
Conductivity	µS/cm	2510 B	< 1.0	50,030	49,040	*
Total Dissolved Solids	mg/l	2540 C	< 25	34,800	33,820	*
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.19	5.16	≥ 4.0

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

Khemchuda Insorn

(Miss Khomchuda Insorn)

Analyst

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(Mrs. Araya Tipparuk)

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4. ** ≤ 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance (natural condition) was 31.2 °C.

5. ≥ Not less than.

6. ≤ Not more than.

7. - Not available.

8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0161/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 02/02/2022	SAMPLING TIME	: 09.15-10.35
RECEIVED DATE	: 03/02/2022	ANALYTICAL DATE	: 02-03/02/2022
REPORT DATE	: 10/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021 **
Salinity	ppt	2520 B	A	31.3	≤ 10%	31.5
			B	30.9		31.8
			C	30.7		31.6
			D	31.1		31.5
			E	31.2		31.5
			I	31.5		31.5
			O	30.9		31.4

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

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Analyst

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6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0161/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 02/02/2022	SAMPLING TIME	: 09.15-10.35
RECEIVED DATE	: 02/02/2022	ANALYTICAL DATE	: 02/02/2022
REPORT DATE	: 10/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021**
Transparency	m	Secchi Disc	A	1.8	≤ 10%	1.7
			B	1.9		1.6
			C	1.5		1.5
			D	1.4		1.5
			E	1.5		1.6
			I	2.1		2.3
			O	1.6		1.5

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

(Mrs. Araya Tipparak)

(Mrs. Araya Tipparak)

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6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0252/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 09/02/2022	SAMPLING TIME	: 10.15-10.55
RECEIVED DATE	: 10/02/2022	ANALYTICAL DATE	: 10-17/02/2022
REPORT DATE	: 17/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	31.9	31.7	32.2	31.7	31.6	-
pH		4500-H ⁺ B	< 0.10	7.91	7.96	7.46	7.95	7.92	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	2.44	2.73	3.17	1.31	1.54	-
Conductivity	µS/cm	2510 B	< 1.0	50,180	50,930	49,940	50,580	49,180	-
Total Dissolved Solids	mg/l	2540 C	< 25	36,320	35,840	35,660	36,700	35,460	-
Residual Chlorine	mg/l	4500-Cl G	< 0.01	ND	ND	ND	ND	ND	< 0.01
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	4.76	5.57	5.51	5.87	5.52	≥ 4.0

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

Khemchuda Insorn

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(Mrs. Araya Tipparak)

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0252/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 09/02/2022	SAMPLING TIME	: 10.25-11.00
RECEIVED DATE	: 10/02/2022	ANALYTICAL DATE	: 10-17/02/2022
REPORT DATE	: 17/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	31.7	31.6	≤ 2**
pH		4500-H B	< 0.10	7.84	7.89	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	2.04	2.33	
Conductivity	µS/cm	2510 B	< 1.0	49,930	49,530	
Total Dissolved Solids	mg/l	2540 C	< 25	36,400	35,740	
Residual Chlorine	mg/l	4500-Cl G	< 0.01	ND	ND	≤ 0.01
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	< 1.0	
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.40	5.31	≥ 4.0

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

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(Mrs. Araya Tipparak)

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7. - Not available.

8. The natural condition was normal during sampling period.



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SAMPLING DATE	: 09/02/2022	SAMPLING TIME	: 10.15-11.00
RECEIVED DATE	: 10/02/2022	ANALYTICAL DATE	: 09-10/02/2022
REPORT DATE	: 17/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Salinity	ppt	2520 B	A	32.8	≤ 10%	31.5
			B	32.2		31.8
			C	32.0		31.6
			D	32.7		31.5
			E	32.1		31.5
			I	32.8		31.5
			O	31.5		31.4

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

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6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

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SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 09/02/2022	SAMPLING TIME	: 10.15-11.00
RECEIVED DATE	: 09/02/2022	ANALYTICAL DATE	: 09/02/2022
REPORT DATE	: 17/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Transparency	m	Secchi Disc	A	1.7	≤ 10%	1.7
			B	2.0		1.6
			C	1.6		1.5
			D	1.8		1.5
			E	1.7		1.6
			I	2.4		2.3
			O	1.9		1.5

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 2011 (AWWA-APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparak

(Mrs. Araya Tipparak)

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 4. ** The minimum value of transparency monitoring results in February 2021.
 5. ≤10% means decrease from the natural condition by not more than 10% which were compared with the minimum value.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0252/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 09/02/2022	SAMPLING TIME	: 10.15-11.00
RECEIVED DATE	: 10/02/2022	ANALYTICAL DATE	: 10-11/02/2022
REPORT DATE	: 17/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD* (Avg.+SD.)**
Suspended Solid (SS)	mg/l	2540 D	A	3.94	12.22
			B	3.96	10.78
			C	4.06	11.64
			D	6.88	13.91
			E	5.46	13.03
			I	3.30	7.51
			O	2.86	17.94

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 2011 (AWWA-APHA, WEF)

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Analyst

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 4. ** The results should not be changed by more than the sum of the yearly average and its Standard Deviation.
(Yearly average of the year 2021 was calculated from monthly samples taken at equal time interval).
 5. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0310/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 17/02/2022	SAMPLING TIME	: 09:21-10:20
RECEIVED DATE	: 18/02/2022	ANALYTICAL DATE	: 18-24/02/2022
REPORT DATE	: 25/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD *
				A	B	E	I	O	
Temperature	°C	2550 B	< 0.5	30.6	30.6	31.6	30.1	29.6	*
pH		4500-H ⁺ B	< 0.10	7.82	7.94	7.75	8.02	7.89	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	9.72	12.07	9.05	2.75	7.71	*
Conductivity	µS/cm	2510 B	< 1.0	49,270	49,370	49,490	49,730	49,220	*
Total Dissolved Solids	mg/l	2540 C	< 25	35,720	35,580	35,260	35,700	36,000	*
Dissolved Oxygen	mg/l	4500-O G	< 0.10	4.33	4.55	4.89	4.96	4.87	≥ 4.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 19th ED. 2017 (AWWA, APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparak

(Mrs. Araya Tipparak)

Technical Management Team

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 4. ≥ Not less than.
 5. * Not available.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0310/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 17/02/2022	SAMPLING TIME	: 09:38-11:00
RECEIVED DATE	: 18/02/2022	ANALYTICAL DATE	: 18-24/02/2022
REPORT DATE	: 25/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD *
				B	C	
Temperature	°C	2550 B	< 0.5	29.7	30.0	≤ 2 **
pH		4500-H ⁺ B	< 0.10	7.97	7.91	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	5.20	6.78	*
Conductivity	µS/cm	2510 B	< 1.0	49,580	49,370	*
Total Dissolved Solids	mg/l	2540 C	< 25	35,960	35,280	*
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.04	5.46	≥ 4.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 19th ED. 2017 (AWWA, APHA, WEF)

Khemchuda Insorn

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Analyst

Araya Tipparak

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 4. ** ≤ 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance (natural condition) was 30.0 °C.
 5. ≥ Not less than.
 6. ≤ Not more than.
 7. - Not available.
 8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0310/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 17/02/2022	SAMPLING TIME	: 09:21-11:00
RECEIVED DATE	: 18/02/2022	ANALYTICAL DATE	: 17-18/02/2022
REPORT DATE	: 25/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021
Salinity	ppt	2520 B	A	31.2	≤ 10%	31.5
			B	31.5		31.8
			C	31.2		31.6
			D	31.3		31.5
			E	31.4		31.5
			F	31.7		31.5
			O	31.1		31.4

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 13TH ED. 2017 (AWWA APHA WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 3. * Notification of the National Environment Board B.E.2564 (2021).
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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0310/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 17/02/2022	SAMPLING TIME	: 09:21-11:00
RECEIVED DATE	: 17/02/2022	ANALYTICAL DATE	: 17/02/2022
REPORT DATE	: 25/02/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021
Transparency	cm	Secchi Disc	A	1.8	≤ 10%	1.7
			B	1.8		1.6
			C	1.6		1.5
			D	1.5		1.5
			E	1.6		1.6
			F	2.5		2.3
			O	1.5		1.5

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 13TH ED. 2017 (AWWA APHA WEF)

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0352/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 23/02/2022	SAMPLING TIME	: 09.43-11.27
RECEIVED DATE	: 24/02/2022	ANALYTICAL DATE	: 24/02/2022-01/03/2022
REPORT DATE	: 01/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD *
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	29.5	30.1	32.0	29.6	29.4	-
pH	-	4500-H ⁺ B	< 0.10	7.91	7.87	7.48	7.93	8.01	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	7.04	5.78	7.05	3.05	6.33	-
Conductivity	µS/cm	2510 B	< 1.0	43,730	44,630	46,580	45,580	46,420	-
Total Dissolved Solids	mg/l	2540 C	< 25	33,400	33,960	33,900	33,780	33,560	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.24	5.39	5.56	5.54	5.42	≥ 4.0

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

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 4. ≥ : Not less than.
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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0352/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 23/02/2022	SAMPLING TIME	: 10.56-11.38
RECEIVED DATE	: 24/02/2022	ANALYTICAL DATE	: 24/02/2022-01/03/2022
REPORT DATE	: 01/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD *
				B	C	
Temperature	°C	2550 B	< 0.5	29.5	29.3	≤ 2 ^{**}
pH	-	4500-H ⁺ B	< 0.10	8.00	8.03	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	2.54	4.43	-
Conductivity	µS/cm	2510 B	< 1.0	46,350	46,240	-
Total Dissolved Solids	mg/l	2540 C	< 25	33,580	32,400	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.72	5.79	≥ 4.0

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

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 6. ≤ : Not more than.
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SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 23/02/2022	SAMPLING TIME	: 09.43-11.38
RECEIVED DATE	: 24/02/2022	ANALYTICAL DATE	: 23-24/02/2022
REPORT DATE	: 01/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Salinity	ppt	2520 B	A	30.0	< 10%	31.5
			B	30.4		31.8
			C	30.3		31.6
			D	30.5		31.5
			E	30.7		31.5
			I	30.8		31.5
			O	30.8		31.4

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

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SAMPLING DATE	: 23/02/2022	SAMPLING TIME	: 09.43-11.38
RECEIVED DATE	: 23/02/2022	ANALYTICAL DATE	: 23/02/2022
REPORT DATE	: 01/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_February

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Transparency	m	Secchi Disc	A	2.0	$\leq 10\%$	1.7
			B	2.5		1.6
			C	1.5		1.5
			D	1.5		1.5
			E	1.7		1.6
			I	3.0		2.3
			O	1.8		1.5

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

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Analyst

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 0415/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 02/03/2022 SAMPLING TIME : 10.02-11.25
RECEIVED DATE : 03/03/2022 ANALYTICAL DATE : 03-10/03/2022
REPORT DATE : 10/03/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD *
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	29.9	29.9	31.0	29.6	29.7	*
pH		4500-H ⁺ B	< 0.10	8.00	7.95	7.62	8.12	7.97	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	10.80	8.46	3.30	1.36	12.60	*
Conductivity	µS/cm	2510 B	< 1.0	47,810	47,120	48,950	49,310	47,420	*
Total Dissolved Solids	mg/l	2540 C	< 25	34,620	34,740	37,340	35,920	35,460	*
Dissolved Oxygen	mg/l	4500-O G	< 0.10	6.87	6.02	6.82	6.33	5.37	≥ 4.0

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

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4. ≥ Not less than.

5. - Not available.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 0415/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 02/03/2022 SAMPLING TIME : 09.38-09.49
RECEIVED DATE : 03/03/2022 ANALYTICAL DATE : 03-10/03/2022
REPORT DATE : 10/03/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD *
				B	C	
Temperature	°C	2550 B	< 0.5	29.5	29.8	≤ 2 **
pH		4500-H ⁺ B	< 0.10	7.83	7.86	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	4.60	14.27	*
Conductivity	µS/cm	2510 B	< 1.0	49,550	48,080	*
Total Dissolved Solids	mg/l	2540 C	< 25	36,380	35,100	*
Dissolved Oxygen	mg/l	4500-O G	< 0.10	6.77	5.57	≥ 4.0

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

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6. ≤ Not more than.

7. - Not available.

8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0415/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 02/03/2022	SAMPLING TIME	: 09.38-11.25
RECEIVED DATE	: 03/03/2022	ANALYTICAL DATE	: 02-03/03/2022
REPORT DATE	: 10/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Salinity	ppt	2520 B	A	31.5	≤ 10%	30.9
			B	32.8		31.2
			C	31.6		31.0
			D	31.0		30.6
			E	32.1		31.0
			I	32.5		31.1
			O	31.9		30.9

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

(Miss Khemchuda Insorn)

Analyst

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SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 02/03/2022	SAMPLING TIME	: 09.38-11.25
RECEIVED DATE	: 02/03/2022	ANALYTICAL DATE	: 02/03/2022
REPORT DATE	: 10/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Transparency	mm	Secchi Disc	A	1.6	≤ 10%	1.4
			B	1.8		1.6
			C	1.6		1.5
			D	1.5		1.2
			E	1.7		1.3
			I	2.7		1.9
			O	1.5		1.4

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

(Miss Khemchuda Insorn)

Analyst

(Mrs. Araya Tipparuk)

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0487/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 09/03/2022	SAMPLING TIME	: 10.34-11.35
RECEIVED DATE	: 10/03/2022	ANALYTICAL DATE	: 10-16/03/2022
REPORT DATE	: 16/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	32.5	33.0	33.4	32.1	31.9	-
pH		4500-H B	< 0.10	7.77	7.79	7.50	7.96	8.01	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	3.01	4.96	4.44	1.76	8.50	-
Conductivity	µS/cm	2510 B	< 1.0	49,700	49,600	49,700	49,400	49,600	-
Total Dissolved Solids	mg/l	2540 C	< 25	37,120	34,760	35,180	35,260	35,000	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	6.03	6.16	6.45	6.47	6.94	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

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4. ≥ Not less than.

5. = Not available.

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SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 09/03/2022	SAMPLING TIME	: 10.17-10.26
RECEIVED DATE	: 10/03/2022	ANALYTICAL DATE	: 10-16/03/2022
REPORT DATE	: 16/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD
				B	C	
Temperature	°C	2550 B	< 0.5	31.8	31.7	≤ 2 ^{**}
pH		4500-H B	< 0.10	8.02	8.03	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	2.67	6.95	-
Conductivity	µS/cm	2510 B	< 1.0	49,900	49,600	-
Total Dissolved Solids	mg/l	2540 C	< 25	34,820	36,200	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	6.47	5.83	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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

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

3. * Notification of the National Environment Board B.E.2564 (2021).

4. ** < 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance (natural condition) was 31.6 °C.

5. ≥ Not less than.

6. ≤ Not more than.

7. - Not available.

8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0487/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 09/03/2022	SAMPLING TIME	: 10.05-11.43
RECEIVED DATE	: 10/03/2022	ANALYTICAL DATE	: 09-10/03/2022
REPORT DATE	: 16/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021**
Salinity	ppt	2520 B	A	31.8	≤ 10%	30.9
			B	32.9		31.2
			C	32.9		31.0
			D	32.9		30.6
			E	32.8		31.0
			I	32.2		31.1
			O	32.4		30.9

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ** The minimum value of salinity monitoring results in March 2021.
 5. ≤ 10% means change from the minimum value by not more than 10%.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0487/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 09/03/2022	SAMPLING TIME	: 10.05-11.43
RECEIVED DATE	: 09/03/2022	ANALYTICAL DATE	: 09/03/2022
REPORT DATE	: 16/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021**
Transparency	m	Secchi Disc	A	1.4	≤ 10%	1.4
			B	1.9		1.6
			C	1.5		1.5
			D	1.3		1.2
			E	1.3		1.3
			I	2.7		1.9
			O	1.6		1.4

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

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 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ** The minimum value of transparency monitoring results in March 2021.
 5. ≤ 10% means decrease from the natural condition by not more than 10% which were compared with the minimum value.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	0542/65
SAMPLING BY	SECOT Co., Ltd.	SAMPLING METHOD	Integrate
SAMPLING DATE	16/03/2022	SAMPLING TIME	09.13-11.46
RECEIVED DATE	17/03/2022	ANALYTICAL DATE	17-22/03/2022
REPORT DATE	22/03/2022	SITE OPERATOR	Mr. Chanatip Singkasemsak
SAMPLE CONDITION	Normal	FILE CODE	222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	32.0	32.2	33.1	32.0	31.7	-
pH	-	4500-H B	< 0.10	8.11	8.05	7.72	8.13	8.10	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	6.92	6.44	3.35	1.40	12.17	-
Conductivity	µS/cm	2510 B	< 1.0	46,400	46,300	48,000	47,800	47,300	-
Total Dissolved Solids	mg/l	2540 C	< 25	36,140	35,680	38,180	37,580	35,260	-
Residual Chlorine	mg/l	4500-Cl G	< 0.01	ND	ND	ND	ND	ND	≤ 0.01
BOD ₅	mg/l	5210 B	< 1.0	1.2	1.3	< 1.0	< 1.0	< 1.0	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.24	5.47	5.36	5.13	5.61	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparak

(Mrs. Araya Tipparak)

Technical Management Team

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4. \geq Not less than.

5. - Not available.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	0542/65
SAMPLING BY	SECOT Co., Ltd.	SAMPLING METHOD	Integrate
SAMPLING DATE	16/03/2022	SAMPLING TIME	10.09-10.24
RECEIVED DATE	17/03/2022	ANALYTICAL DATE	17-22/03/2022
REPORT DATE	22/03/2022	SITE OPERATOR	Mr. Chanatip Singkasemsak
SAMPLE CONDITION	Normal	FILE CODE	222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD
				B	C	
Temperature	°C	2550 B	< 0.5	31.5	31.7	≤ 2 [°]
pH	-	4500-H B	< 0.10	8.15	8.18	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	5.77	5.61	-
Conductivity	µS/cm	2510 B	< 1.0	47,000	47,400	-
Total Dissolved Solids	mg/l	2540 C	< 25	36,640	36,700	-
Residual Chlorine	mg/l	4500-Cl G	< 0.01	ND	ND	≤ 0.01
BOD ₅	mg/l	5210 B	< 1.0	1.2	< 1.0	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.56	5.61	≥ 4.0

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

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4. ≤ 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance (natural condition) was 31.9 °C.

5. \geq Not less than.

6. \leq Not more than.

7. - Not available.

8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 0542/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 16/03/2022 SAMPLING TIME : 09.13-11.46
RECEIVED DATE : 17/03/2022 ANALYTICAL DATE : 16-17/03/2022
REPORT DATE : 22/03/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Salinity	ppt	2520 B	A	30.8	≤ 10%	30.9
			B	30.7		31.2
			C	30.9		31.0
			D	30.4		30.6
			E	31.0		31.0
			I	31.1		31.1
			O	30.7		30.9

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

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Analyst

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(Mrs. Araya Tipparuk)

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 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 0542/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 16/03/2022 SAMPLING TIME : 09.13-11.46
RECEIVED DATE : 16/03/2022 ANALYTICAL DATE : 16/03/2022
REPORT DATE : 22/03/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Transparency	m	Secchi Disc	A	1.5	≤ 10%	1.4
			B	1.6		1.6
			C	1.4		1.5
			D	1.6		1.2
			E	1.4		1.3
			I	2.4		1.9
			O	1.5		1.4

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

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 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0542/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 16/03/2022	SAMPLING TIME	: 09.13-11.46
RECEIVED DATE	: 17/03/2022	ANALYTICAL DATE	: 21-22/03/2022
REPORT DATE	: 22/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD* (Avg.+SD.)**
Suspended Solid (SS)	mg/l	2540 D	A	7.24	12.22
			B	4.70	10.78
			C	8.20	11.64
			D	6.95	13.91
			E	4.16	13.03
			I	2.73	7.51
			O	14.70	17.94

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

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Analyst

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(Mrs. Araya Tipparuk)

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4. * The results should not be changed by more than the sum of the yearly average and its Standard Deviation

(Yearly average of the year 2021 was calculated from monthly samples taken at equal time interval).

5. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0604/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 23/03/2022	SAMPLING TIME	: 09.38-11.16
RECEIVED DATE	: 24/03/2022	ANALYTICAL DATE	: 24-29/03/2022
REPORT DATE	: 30/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD*
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	29.7	30.1	31.4	29.0	29.6	*
pH		4500-H B	< 0.10	7.58	7.56	7.30	7.88	7.83	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	8.65	10.57	7.66	5.18	12.27	*
Conductivity	µS/cm	2510 B	< 1.0	47,800	47,500	47,100	47,600	47,000	*
Total Dissolved Solids	mg/l	2540 C	< 25	38,460	35,640	37,800	37,800	36,920	*
Dissolved Oxygen	mg/l	4500-D G	< 0.10	5.64	5.36	5.81	5.78	5.28	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. * Not less than.

5. * Not available.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	0604/65
SAMPLING BY	SECOT Co., Ltd.	SAMPLING METHOD	Integrate
SAMPLING DATE	23/03/2022	SAMPLING TIME	09:19-09:29
RECEIVED DATE	24/03/2022	ANALYTICAL DATE	24-29/03/2022
REPORT DATE	30/03/2022	SITE OPERATOR	Mr. Chanatip Singkasensak
SAMPLE CONDITION	Normal	FILE CODE	222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	29.4	29.5	≤ 2**
pH	-	4500-H ¹ B	< 0.10	7.86	7.87	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	4.67	7.77	-
Conductivity	µS/cm	2510 B	< 1.0	47,600	47,900	-
Total Dissolved Solids	mg/l	2540 C	< 25	37,300	36,020	-
Dissolved Oxygen	mg/l	4500-O ¹ G	< 0.10	5.91	5.23	≥ 4.0

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

Khemchuda Inorn

(Miss Khemchuda Inorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ** ≤ 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance (natural condition) was 29.3 °C.
 5. ≥ Not less than.
 6. ≤ Not more than.
 7. - Not available.
 8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	0604/65
SAMPLING BY	SECOT Co., Ltd.	SAMPLING METHOD	Integrate
SAMPLING DATE	23/03/2022	SAMPLING TIME	09:19-11:16
RECEIVED DATE	24/03/2022	ANALYTICAL DATE	23-24/03/2022
REPORT DATE	30/03/2022	SITE OPERATOR	Mr. Chanatip Singkasensak
SAMPLE CONDITION	Normal	FILE CODE	222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Salinity	ppt	2520 B	A	31.0	< 10%	30.9
			B	31.1		31.2
			C	31.2		31.0
			D	30.9		30.6
			E	30.6		31.0
			F	30.9		31.1
			G	30.5		30.9

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

Khemchuda Inorn

(Miss Khemchuda Inorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

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 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0604/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 23/03/2022	SAMPLING TIME	: 09.19-11.16
RECEIVED DATE	: 23/03/2022	ANALYTICAL DATE	: 23/03/2022
REPORT DATE	: 30/03/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021**
Transparency	m	Secchi Disc	A	1.4	≤ 10%	1.4
			B	1.7		1.6
			C	1.8		1.5
			D	1.1		1.2
			E	1.5		1.3
			I	2.4		1.9
			O	1.4		1.4

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparak

(Mrs. Araya Tipparak)

Technical Management Team

- Remark :
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ** The minimum value of transparency monitoring results in March 2021.
 5. ≤10% means decrease from the natural condition by not more than 10% which were compared with the minimum value.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0663/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 30/03/2022	SAMPLING TIME	: 09.40-12.16
RECEIVED DATE	: 31/03/2022	ANALYTICAL DATE	: 31/03/2022-05/04/2022
REPORT DATE	: 06/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-defectable)	STATION					STANDARD
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	32.0	32.8	33.0	31.8	32.0	*
pH		4500-H ⁺ B	< 0.10	8.06	7.90	7.86	8.04	8.06	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	2.65	3.64	2.78	1.13	6.69	*
Conductivity	µS/cm	2510 B	< 1.0	49,200	49,300	49,200	48,400	44,500	*
Total Dissolved Solids	mg/l	2540 C	< 25	36,620	36,480	36,240	34,940	32,760	*
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.20	5.30	5.30	4.99	5.30	≥ 4.0

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

Khemchuda Insorn

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Analyst

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(Mrs. Araya Tipparak)

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 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ≥ Not less than.
 5. - Not available.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0663/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 30/03/2022	SAMPLING TIME	: 09.55-10.10
RECEIVED DATE	: 31/03/2022	ANALYTICAL DATE	: 31/03/2022-05/04/2022
REPORT DATE	: 06/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD ¹
				B	C	
Temperature	°C	2550 B	< 0.5	31.8	31.7	≤ 2 ^{**}
pH		4500-H ¹ B	< 0.10	8.06	8.08	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	1.89	6.03	-
Conductivity	µS/cm	2510 B	< 1.0	49,700	48,100	-
Total Dissolved Solids	mg/l	2540 C	< 25	37,080	35,460	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	4.99	5.54	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ** ≤ 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance (natural condition) was 31.8 °C.
 5. ≥ Not less than.
 6. ≤ Not more than.
 7. - Not available.
 8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

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SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 30/03/2022	SAMPLING TIME	: 09.40-12.16
RECEIVED DATE	: 31/03/2022	ANALYTICAL DATE	: 30-31/03/2022
REPORT DATE	: 06/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD ¹	THE MINIMUM VALUE IN THE YEAR 2021 ^{**}
Salinity	ppt	2520 B	A	32.5	≤ 10%	30.9
			B	32.8		31.2
			C	31.7		31.0
			D	32.5		30.6
			E	32.8		31.0
			I	31.8		31.1
			O	31.0		30.9

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

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SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 30/03/2022	SAMPLING TIME	: 09.40-12.16
RECEIVED DATE	: 30/03/2022	ANALYTICAL DATE	: 30/03/2022
REPORT DATE	: 06/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_March

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021
Transparency	m	Secchi Disc	A	1.4	≤ 10%	1.4
			B	1.9		1.6
			C	1.5		1.5
			D	1.8		1.2
			E	1.4		1.3
			I	2.7		1.9
			O	1.6		1.4

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

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(Mrs. Araya Tipparuk)

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6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0736/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 06/04/2022	SAMPLING TIME	: 10.29-11.01
RECEIVED DATE	: 07/04/2022	ANALYTICAL DATE	: 07-19/04/2022
REPORT DATE	: 19/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	31.9	31.4	32.1	31.7	31.4	*
pH	*	4500-H ⁺ B	< 0.10	8.04	8.09	8.09	8.02	8.03	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	1.75	2.54	4.80	1.85	3.71	-
Conductivity	μS/cm	2510 B	< 1.0	47,900	48,100	48,200	47,600	46,500	*
Total Dissolved Solids	mg/l	2540 C	< 25	36,800	36,320	34,040	36,360	34,820	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.51	5.42	5.51	5.67	5.93	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. ≥ Not less than.

5. - Not available.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0736/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 06/04/2022	SAMPLING TIME	: 10:20-10:24
RECEIVED DATE	: 07/04/2022	ANALYTICAL DATE	: 07-19/04/2022
REPORT DATE	: 19/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	31.7	31.4	≤ 2**
pH		4500-H ⁺ B	< 0.10	8.07	8.09	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	1.53	1.60	-
Conductivity	µS/cm	2510 B	< 1.0	48,100	47,900	-
Total Dissolved Solids	mg/l	2540 C	< 25	36,560	36,120	-
Dissolved Oxygen	mg/l	4500-O ₂ G	< 0.10	5.48	5.34	> 4.0

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

Khemchuda Inorn

(Miss Khemchuda Inorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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4. ** ≤ 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance (natural condition) was 31.3 °C.

5. ≥ Not less than.

6. ≤ Not more than.

7. - Not available.

8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0736/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 06/04/2022	SAMPLING TIME	: 10:15-11:15
RECEIVED DATE	: 07/04/2022	ANALYTICAL DATE	: 06-07/04/2022
REPORT DATE	: 19/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Salinity	ppt	2520 B	A	32.0	≤ 10%	31.3
			B	31.9		31.5
			C	31.1		31.3
			D	31.4		31.4
			E	31.7		31.5
			F	31.8		31.6
			O	31.0		29.9

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

Khemchuda Inorn

(Miss Khemchuda Inorn)

Analyst

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(Mrs. Araya Tipparuk)

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4. ** The minimum value of salinity monitoring results in April 2021.

5. ≤ 10% means change from the minimum value by not more than 10%.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0736/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 06/04/2022	SAMPLING TIME	: 10.15-11.18
RECEIVED DATE	: 06/04/2022	ANALYTICAL DATE	: 06/04/2022
REPORT DATE	: 19/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021
Transparency	m	Secchi Disc	A	1.6	≤ 10%	1.5
			B	1.8		1.5
			C	1.7		1.3
			D	1.7		1.5
			E	1.5		1.3
			I	2.2		1.7
			O	1.5		1.2

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

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(Mrs. Araya Tipparak)

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 4. ** The minimum value of transparency monitoring results in April 2021.
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 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0796/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 11/04/2022	SAMPLING TIME	: 09.27-10.53
RECEIVED DATE	: 12/04/2022	ANALYTICAL DATE	: 12-19/04/2022
REPORT DATE	: 19/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	31.6	31.9	32.4	31.5	31.3	-
pH		4500-H ⁺ B	< 0.10	8.15	8.10	8.10	8.13	8.25	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	2.51	3.12	3.43	1.67	3.66	-
Conductivity	µS/cm	2510 B	< 1.0	48,900	49,000	48,800	48,900	44,000	-
Total Dissolved Solids	mg/l	2540 C	< 25	37,080	35,680	35,640	35,000	32,560	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	4.88	4.80	4.73	4.67	4.75	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparak

(Mrs. Araya Tipparak)

Technical Management Team

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 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ≥ Not less than.
 5. - Not available.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 0796/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 11/04/2022 SAMPLING TIME : 09:07-10:32
RECEIVED DATE : 12/04/2022 ANALYTICAL DATE : 12-19/04/2022
REPORT DATE : 19/04/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	31.4	31.5	≤ 2 **
pH		4500-H B	< 0.10	8.10	8.12	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	1.93	2.30	
Conductivity	µS/cm	2510 B	< 1.0	49,100	48,900	
Total Dissolved Solids	mg/l	2540 C	< 25	33,200	34,940	
Dissolved Oxygen	mg/l	4500-O G	< 0.10	4.49	4.55	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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4. ** ≤ 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance
(natural condition) was 31.7 °C.

5. ≥ Not less than.

6. ≤ Not more than.

7. - Not available.

8. The natural condition was normal during sampling period.



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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 0796/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 11/04/2022 SAMPLING TIME : 09:07-10:53
RECEIVED DATE : 12/04/2022 ANALYTICAL DATE : 11-12/04/2022
REPORT DATE : 19/04/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021 **
Salinity	ppt	2520 B	A	32.3	≤ 10%	31.3
			B	32.4		31.5
			C	32.2		31.3
			D	32.4		31.4
			E	32.2		31.5
			I	32.3		31.6
			O	31.8		29.9

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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

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

3. * Notification of the National Environment Board B.E.2564 (2021).

4. ** The minimum value of salinity monitoring results in April 2021.

5. ≤ 10% means change from the minimum value by not more than 10%.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 0796/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 11/04/2022 SAMPLING TIME : 09:07-10:53
RECEIVED DATE : 11/04/2022 ANALYTICAL DATE : 11/04/2022
REPORT DATE : 19/04/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021
Transparency	m	Secchi Disc	A	1.6	≤ 10%	1.5
			B	1.9		1.5
			C	1.8		1.3
			D	1.4		1.3
			E	1.5		1.3
			I	2.3		1.7
			O	1.5		1.2

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 1017 (AWWA-APHA-WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. ** The minimum value of transparency monitoring results in April 2021.

5. ≤10% means decrease from the natural condition by not more than 10% which were compared with the minimum value.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 0816/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 20/04/2022 SAMPLING TIME : 09:24-10:30
RECEIVED DATE : 21/04/2022 ANALYTICAL DATE : 21-26/04/2022
REPORT DATE : 27/04/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	31.4	32.3	33.5	31.2	31.5	*
pH		4500-H B	< 0.10	7.89	7.95	7.76	7.85	8.03	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	1.28	1.74	3.47	1.74	4.32	*
Conductivity	µS/cm	2510 B	< 1.0	50,600	48,700	48,700	48,700	48,200	*
Total Dissolved Solids	mg/l	2540 C	< 25	38,420	37,060	36,740	36,600	36,720	*
Residual Chlorine	mg/l	4500-Cl G	< 0.01	ND	ND	ND	ND	ND	≤ 0.01
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	*
Dissolved Oxygen	mg/l	4500-O G	< 0.10	6.23	5.83	5.78	5.48	6.47	> 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. ≥ Not less than.

5. - Not available.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 0816/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 20/04/2022 SAMPLING TIME : 09:10-09:16
RECEIVED DATE : 21/04/2022 ANALYTICAL DATE : 21-26/04/2022
REPORT DATE : 27/04/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	31.2	31.2	≤ 2**
pH		4500-H B	< 0.10	7.99	7.89	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	1.42	1.20	*
Conductivity	µS/cm	2510 B	< 1.0	50,200	50,600	*
Total Dissolved Solids	mg/l	2540 C	< 25	38,120	38,220	*
Residual Chlorine	mg/l	4500-Cl G	< 0.01	ND	ND	≤ 0.01
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	< 1.0	*
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.87	5.60	≥ 4.0

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

(Miss Khemchuda Inorn)
Analyst

(Mrs. Araya Tipparuk)
Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).
4. ** ≤ 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance (natural condition) was 31.4 °C.
5. ≥ Not less than.
6. ≤ Not more than.
7. = Not available.
8. The natural condition was normal during sampling period.



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SAMPLING DATE : 20/04/2022 SAMPLING TIME : 09:10-10:30
RECEIVED DATE : 21/04/2022 ANALYTICAL DATE : 20-21/04/2022
REPORT DATE : 27/04/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE
						IN THE YEAR 2021**
Salinity	ppt	2520 B	A	32.9	≤ 10%	31.3
			B	32.6		31.5
			C	32.1		31.3
			D	32.1		31.4
			E	32.0		31.5
			F	32.0		31.6
			G	31.7		29.9

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

(Miss Khemchuda Inorn)
Analyst

(Mrs. Araya Tipparuk)
Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).
4. ** The minimum value of salinity monitoring results in April 2021.
5. ≤ 10% means change from the minimum value by not more than 10%.
6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0816/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 20/04/2022	SAMPLING TIME	: 09.10-10.30
RECEIVED DATE	: 20/04/2022	ANALYTICAL DATE	: 20/04/2022
REPORT DATE	: 27/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Transparency	m	Secchi Disc	A	1.5	≤ 10%	1.5
			B	1.6		1.5
			C	1.7		1.3
			D	1.4		1.5
			E	1.5		1.3
			I	1.9		1.7
			O	1.6		1.2

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. ** The minimum value of transparency monitoring results in April 2021.

5. ≤10% means decrease from the natural condition by not more than 10% which were compared with the minimum value.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0816/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 20/04/2022	SAMPLING TIME	: 09.10-10.30
RECEIVED DATE	: 21/04/2022	ANALYTICAL DATE	: 23.25/04/2022
REPORT DATE	: 27/04/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD* (Avg.±SD.)**
Suspended Solid (SS)	mg/l	2540 D	A	< 2.5	12.22
			B	< 2.5	10.78
			C	< 2.5	11.64
			D	3.36	13.91
			E	5.74	13.03
			I	2.65	7.51
			O	5.20	17.94

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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4. The results should not be changed by more than the sum of the yearly average and its Standard Deviation

(Yearly average of the year 2021 was calculated from monthly samples taken at equal time interval).

5. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 0874/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 27/04/2022 SAMPLING TIME : 09.20-10.30
RECEIVED DATE : 28/04/2022 ANALYTICAL DATE : 28/04/2022-05/05/2022
REPORT DATE : 06/05/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD*
				A	B	E	I	O	
Temperature	°C	2550 B	< 0.5	33.8	33.9	35.0	33.2	33.3	-
pH	-	4500-H B	< 0.10	7.98	7.90	7.50	8.04	8.12	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	3.27	3.58	4.45	2.69	8.70	-
Conductivity	µS/cm	2510 B	< 1.0	48,600	48,300	48,400	48,500	45,900	-
Total Dissolved Solids	mg/l	2540 C	< 25	37,660	34,560	36,560	35,800	33,920	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.04	5.33	5.17	5.34	5.18	≥ 4.0

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

Khemchuda Inorn

(Miss Khemchuda Inorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. ≥ Not less than.

5. - Not available.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 0874/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 27/04/2022 SAMPLING TIME : 09.02-10.10
RECEIVED DATE : 28/04/2022 ANALYTICAL DATE : 28/04/2022-05/05/2022
REPORT DATE : 06/05/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	33.1	32.9	≤ 2**
pH	-	4500-H B	< 0.10	7.83	8.34	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	2.55	5.91	-
Conductivity	µS/cm	2510 B	< 1.0	48,400	47,600	-
Total Dissolved Solids	mg/l	2540 C	< 25	36,520	35,140	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.31	5.23	≥ 4.0

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

Khemchuda Inorn

(Miss Khemchuda Inorn)

Analyst

Araya Tipparuk

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Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. ** ≤ 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance (natural condition) was 33.0 °C.

5. ≥ Not less than.

6. ≤ Not more than.

7. - Not available.

8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0874/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 27/04/2022	SAMPLING TIME	: 09.02-10.30
RECEIVED DATE	: 28/04/2022	ANALYTICAL DATE	: 27-28/04/2022
REPORT DATE	: 06/05/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021**
Salinity	ppt	2520 B	A	32.3	≤ 10%	31.3
			B	32.0		31.5
			C	31.3		31.3
			D	31.9		31.4
			E	31.9		31.5
			I	32.0		31.6
			O	31.1		29.9

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21ST ED 2017 (AWWA/PHA/WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ** The minimum value of salinity monitoring results in April 2021.
 5. ≤ 10% means change from the minimum value by not more than 10%.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0874/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 27/04/2022	SAMPLING TIME	: 09.02-10.30
RECEIVED DATE	: 27/04/2022	ANALYTICAL DATE	: 27/04/2022
REPORT DATE	: 06/05/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_April

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021**
Transparency	m	Secchi Disc	A	1.4	≤ 10%	1.5
			B	1.4		1.5
			C	1.7		1.3
			D	1.4		1.5
			E	1.4		1.3
			I	1.8		1.7
			O	1.3		1.2

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21ST ED 2017 (AWWA/PHA/WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 4. ** The minimum value of transparency monitoring results in April 2021.
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 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0913/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 04/05/2022	SAMPLING TIME	: 09.35-10.50
RECEIVED DATE	: 05/05/2022	ANALYTICAL DATE	: 05-11/05/2022
REPORT DATE	: 11/05/2022	SITE OPERATOR	: Mr. Chanatip Singkasomsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD*
				A	B	E	I	O	
Temperature	°C	2550 B	< 0.5	32.5	32.6	33.0	32.4	32.3	-
pH	-	4500-H B	< 0.10	7.73	7.74	7.54	7.78	7.95	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	2.92	3.94	3.74	1.75	4.44	-
Conductivity	µS/cm	2510 B	< 1.0	48,200	48,300	48,300	48,300	48,200	-
Total Dissolved Solids	mg/l	2540 C	< 25	35,160	37,860	37,960	36,980	37,100	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.47	5.64	5.95	5.11	5.39	≥ 4.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2012 (AWWA-APHA-WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparak

(Mrs. Araya Tipparak)

Technical Management Team

- Remark:
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 2. This report shall not be reproduced, except in full, without official approval.
 3. Notification of the National Environment Board B.E.2564 (2021).
 4. - Not less than.
 5. - Not available.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0913/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 04/05/2022	SAMPLING TIME	: 09.23-09.27
RECEIVED DATE	: 05/05/2022	ANALYTICAL DATE	: 05-11/05/2022
REPORT DATE	: 11/05/2022	SITE OPERATOR	: Mr. Chanatip Singkasomsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	32.4	32.3	≤ 2**
pH	-	4500-H B	< 0.10	7.76	7.80	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	2.91	2.67	-
Conductivity	µS/cm	2510 B	< 1.0	48,400	48,000	-
Total Dissolved Solids	mg/l	2540 C	< 25	36,940	37,720	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.40	5.31	≥ 4.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2012 (AWWA-APHA-WEF)

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Analyst

Araya Tipparak

(Mrs. Araya Tipparak)

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 4. ** ≤ 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance (natural condition) was 32.2 °C.
 5. - Not less than.
 6. ≤ Not more than.
 7. - Not available.
 8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0913/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 04/05/2022	SAMPLING TIME	: 09:23-10:50
RECEIVED DATE	: 05/05/2022	ANALYTICAL DATE	: 04-05/05/2022
REPORT DATE	: 11/05/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021
Salinity	ppt	2520 B	A	31.3	≤ 10%	31.2
			B	31.5		31.2
			C	31.3		31.0
			D	31.5		31.5
			E	31.4		31.5
			I	31.5		31.4
			O	31.4		31.3

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 19th ED. 2017 (AWWA APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tippiaruk

(Mrs. Araya Tippiaruk)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 0913/65
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SAMPLING DATE	: 04/05/2022	SAMPLING TIME	: 09:23-10:50
RECEIVED DATE	: 04/05/2022	ANALYTICAL DATE	: 04/05/2022
REPORT DATE	: 11/05/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021
Transparency	m	Secchi Disc	A	1.5	≤ 10%	1.2
			B	1.7		1.3
			C	1.7		1.3
			D	1.6		1.0
			E	1.3		1.2
			I	2.5		1.9
			O	1.3		1.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 19th ED. 2017 (AWWA APHA, WEF)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tippiaruk

(Mrs. Araya Tippiaruk)

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 1002/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 11/05/2022 SAMPLING TIME : 10.22-11.30
RECEIVED DATE : 12/05/2022 ANALYTICAL DATE : 12-20/05/2022
REPORT DATE : 20/05/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD*
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	31.8	32.1	32.3	32.0	32.1	-
pH	-	4500-H ⁺ B	< 0.10	7.73	7.76	7.63	7.83	7.81	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	4.67	5.05	3.97	3.03	7.76	-
Conductivity	µS/cm	2510 B	< 1.0	47,500	47,500	47,700	47,900	45,900	-
Total Dissolved Solids	mg/l	2540 C	< 25	35,200	34,860	36,460	35,760	34,440	-
Dissolved Oxygen	mg/l	4500-O ₂ G	< 0.10	6.35	6.54	5.37	5.57	6.21	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 5. - Not available.
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CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 1002/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 11/05/2022 SAMPLING TIME : 10.30-11.06
RECEIVED DATE : 12/05/2022 ANALYTICAL DATE : 12-20/05/2022
REPORT DATE : 20/05/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	31.6	31.4	≤ 2 ^{**}
pH	-	4500-H ⁺ B	< 0.10	7.77	7.83	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	4.74	6.47	-
Conductivity	µS/cm	2510 B	< 1.0	47,600	46,900	-
Total Dissolved Solids	mg/l	2540 C	< 25	36,880	34,820	-
Dissolved Oxygen	mg/l	4500-O ₂ G	< 0.10	5.92	5.49	≥ 4.0

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

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 6. ≤ Not more than.
 7. - Not available.
 8. The natural condition was normal during sampling period.



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SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 11/05/2022	SAMPLING TIME	: 10.22-11.30
RECEIVED DATE	: 12/05/2022	ANALYTICAL DATE	: 12-13/05/2022
REPORT DATE	: 20/05/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Safinity	ppt	2520 B	A	31.1	≤ 10%	31.2
			B	31.1		31.2
			C	30.7		31.0
			D	30.7		31.5
			E	31.2		31.5
			I	31.4		31.4
			O	30.9		31.3

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

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Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 1002/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 11/05/2022	SAMPLING TIME	: 10.22-11.30
RECEIVED DATE	: 11/05/2022	ANALYTICAL DATE	: 11/05/2022
REPORT DATE	: 20/05/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Transparency	m	Secchi Disc	A	1.6	≤ 10%	1.2
			B	1.7		1.3
			C	1.7		1.3
			D	1.5		1.0
			E	1.4		1.2
			I	2.4		1.9
			O	1.4		1.0

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

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Analyst

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(Mrs. Araya Tipparuk)

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6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 1062/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 18/05/2022 SAMPLING TIME : 10,05-11,40
RECEIVED DATE : 19/05/2022 ANALYTICAL DATE : 19-30/05/2022
REPORT DATE : 30/05/2022 SITE OPERATOR : Mr. Aniwat Pinwanna
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD*
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	34.0	33.8	34.2	33.2	33.4	≤ 2
pH		4500-H ¹ B	< 0.10	7.47	7.56	7.65	7.56	7.74	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	6.79	6.63	5.18	3.53	6.52	≤ 2
Conductivity	µS/cm	2510 B	< 1.0	48,350	48,250	48,410	48,040	48,840	≤ 2
Total Dissolved Solids	mg/l	2540 C	< 25	36,460	35,900	36,640	35,500	36,360	≤ 2
Residual Chlorine	mg/l	4500-Cl G	< 0.01	ND	ND	ND	ND	ND	≤ 0.01
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	< 1.0	1.2	1.3	1.5	≤ 2
Dissolved Oxygen	mg/l	4500-O G	< 0.10	6.46	5.93	6.19	6.30	6.47	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 5. - Not available.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 1062/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 18/05/2022 SAMPLING TIME : 10.20-10.42
RECEIVED DATE : 19/05/2022 ANALYTICAL DATE : 19-30/05/2022
REPORT DATE : 30/05/2022 SITE OPERATOR : Mr. Aniwat Pinwanna
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	33.3	33.0	≤ 2
pH		4500-H ¹ B	< 0.10	7.56	7.86	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	4.67	5.21	≤ 2
Conductivity	µS/cm	2510 B	< 1.0	48,620	48,870	≤ 2
Total Dissolved Solids	mg/l	2540 C	< 25	35,300	35,080	≤ 2
Residual Chlorine	mg/l	4500-Cl G	< 0.01	ND	ND	≤ 0.01
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	1.6	≤ 2
Dissolved Oxygen	mg/l	4500-O G	< 0.10	6.02	5.93	≥ 4.0

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

Khemchuda Insorn

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Analyst

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 5. ≥ Not less than.
 6. ≤ Not more than.
 7. - Not available.
 8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

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SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 18/05/2022	SAMPLING TIME	: 10.05-11.40
RECEIVED DATE	: 19/05/2022	ANALYTICAL DATE	: 18-19/05/2022
REPORT DATE	: 30/05/2022	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD ¹	THE MINIMUM VALUE IN THE YEAR 2021 ²
Salinity	ppt	2520 B	A	31.7	≤ 10%	31.2
			B	31.6		31.2
			C	31.3		31.0
			D	31.9		31.5
			E	31.8		31.5
			F	31.6		31.4
			O	31.4		31.3

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

M. Araya Tipparuk

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 5. ≤ 10% means change from the minimum value by not more than 10%.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 1062/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 18/05/2022	SAMPLING TIME	: 10.05-11.40
RECEIVED DATE	: 19/05/2022	ANALYTICAL DATE	: 18/05/2022
REPORT DATE	: 30/05/2022	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD ¹	THE MINIMUM VALUE IN THE YEAR 2021 ²
Transparency	m	Secchi Disc	A	1.3	≤ 10%	1.2
			B	1.4		1.3
			C	1.3		1.3
			D	1.2		1.0
			E	1.4		1.2
			F	1.8		1.9
			O	1.0		1.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

M. Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 3. *Notification of the National Environment Board B.E.2564 (2021).
 4. ** The minimum value of transparency monitoring results in May 2021.
 5. ≤ 10% means decrease from the natural condition by not more than 10% which were compared with the minimum value.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 1062/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 18/05/2022	SAMPLING TIME	: 10.05-11.40
RECEIVED DATE	: 19/05/2022	ANALYTICAL DATE	: 20-21/05/2022
REPORT DATE	: 30/05/2022	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD* (Avg.±SD.)**
Suspended Solid (SS)	mg/l	2540 D	A	4.92	12.22
			B	4.82	10.78
			C	3.12	11.64
			D	6.00	13.91
			E	5.84	13.03
			I	3.92	7.51
			O	11.88	17.94

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

Khemchuda Inorn

(Miss Khemchuda Inorn)

Analyst

(Mrs. Araya Tipparuk)

(Mrs. Araya Tipparuk)

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4. **The results should not be changed by more than the sum of the yearly average and its Standard Deviation
(Yearly average of the year 2021 was calculated from monthly samples taken at equal time interval).

5. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 1062/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 18/05/2022	SAMPLING TIME	: 10.05-11.40
RECEIVED DATE	: 19/05/2022	ANALYTICAL DATE	: 19-20/05/2022
REPORT DATE	: 30/05/2022	SITE OPERATOR	: Mr. Aniwat Pimwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION								STANDARD*
				A	B	C	D	E	I	O		
Arsenic (As)	µg/l	3114 C	< 0.10	1.24	1.14	1.35	1.18	1.18	1.03	1.36		≤ 10
Iron (Fe)	µg/l	3120 B	< 50.00	ND	ND	ND	ND	ND	ND	ND		≤ 300
Lead (Pb)	µg/l	3113 B	< 3.00	ND	ND	ND	ND	ND	ND	ND		≤ 8.5
Mercury (Hg)	µg/l	3112 B	< 0.05	ND	ND	ND	ND	ND	ND	ND		≤ 0.1
Selenium (Se)	µg/l	3114 C	< 0.50	ND	ND	ND	ND	ND	ND	ND		

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

(Miss Krisana Chanthoom)

(Miss Krisana Chanthoom)

Analyst

(Mrs. Araya Tipparuk)

(Mrs. Araya Tipparuk)

Technical Management Team

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4. ≤ Not more than.

5. - Not available.

6. The natural condition was normal during sampling period.



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SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 18/05/2022	SAMPLING TIME	: 10.05-11.40
RECEIVED DATE	: 19/05/2022	ANALYTICAL DATE	: 20, 23-25/05/2022
REPORT DATE	: 30/05/2022	SITE OPERATOR	: Mr. Aniwat Pinwanna
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	RESULT	STANDARD*
Total Petroleum Hydrocarbon (TPH)	µg/l	Pro-Concentration/ Fluorescence Spectrometric	< 0.25	A	ND	≤ 5
				B	ND	
				C	ND	
				D	ND	
				E	ND	
				I	ND	
				O	ND	

REFERENCE: INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION OF UNESCO (IOC) 1981

(Miss Narisa Poowasanpetch)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 1128/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 25/05/2022	SAMPLING TIME	: 10.28-11.32
RECEIVED DATE	: 26/05/2022	ANALYTICAL DATE	: 26-31/05/2022
REPORT DATE	: 01/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD*
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	32.7	33.0	33.5	32.9	32.6	-
pH		4500-H B	< 0.10	7.78	7.67	7.98	7.91	8.06	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	6.02	7.19	5.52	1.86	3.46	-
Conductivity	µS/cm	2510 B	< 1.0	48,700	48,200	48,000	48,300	47,900	-
Total Dissolved Solids	mg/l	2540 C	< 25	38,180	38,300	37,060	39,040	39,020	-
Dissolved Oxygen	mg/l	4500-D G	< 0.10	5.70	5.64	5.80	5.35	5.53	≥ 4.0

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

(Miss Khemchuda Insorn)

Analyst

(Mrs. Araya Tipparuk)

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5. - Not available.
6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 1128/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 25/05/2022 SAMPLING TIME : 10.10-11.02
RECEIVED DATE : 26/05/2022 ANALYTICAL DATE : 26-31/05/2022
REPORT DATE : 01/06/2022 SITE OPERATOR : Mr. Chanatip Singkasomsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	32.5	32.4	≤ 2**
pH		4500-H B	< 0.10	7.84	7.95	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	6.58	5.06	
Conductivity	µS/cm	2510 B	< 1.0	48,500	48,600	
Total Dissolved Solids	mg/l	2540 C	< 25	39,620	33,000	
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.75	5.34	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

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(Mrs. Araya Tipparuk)

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 5. ≥ Not less than.
 6. ≤ Not more than.
 7. - Not available.
 8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 1128/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 25/05/2022 SAMPLING TIME : 10.10-11.32
RECEIVED DATE : 26/05/2022 ANALYTICAL DATE : 25-26/05/2022
REPORT DATE : 01/06/2022 SITE OPERATOR : Mr. Chanatip Singkasomsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Salinity	ppt	2520 B	A	32.0	≤ 10%	31.2
			B	32.0		31.2
			C	32.0		31.0
			D	31.8		31.5
			E	31.6		31.5
			I	31.8		31.4
			O	31.5		31.3

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

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Analyst

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 1128/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 25/05/2022 SAMPLING TIME : 10.10-11.32
RECEIVED DATE : 25/05/2022 ANALYTICAL DATE : 25/05/2022
REPORT DATE : 01/06/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_May

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Transparency	m	Secchi Disc	A	1.4	≤ 10%	1.2
			B	1.5		1.3
			C	1.2		1.3
			D	1.2		1.0
			E	1.2		1.2
			F	2.0		1.9
			O	1.5		1.0

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

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Analyst

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(Mrs. Araya Tipparuk)

Technical Management Team

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6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 1185/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 01/06/2022 SAMPLING TIME : 09.41-11.00
RECEIVED DATE : 02/06/2022 ANALYTICAL DATE : 02-07/06/2022
REPORT DATE : 08/06/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD*
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	33.5	33.6	33.9	32.9	32.8	*
pH		4500-H ⁺ B	< 0.10	7.76	7.66	7.51	7.80	7.96	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	6.49	6.07	6.50	1.68	7.43	*
Conductivity	µS/cm	2510 B	< 1.0	49,100	49,100	48,900	49,100	47,100	*
Total Dissolved Solids	mg/l	2540 C	< 25	34,960	35,520	33,560	33,860	34,240	*
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.47	5.40	5.55	5.46	5.71	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

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4. ≥ Not less than.

5. - Not available.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 1185/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 01/06/2022	SAMPLING TIME	: 09:49-10:22
RECEIVED DATE	: 02/06/2022	ANALYTICAL DATE	: 02-07/06/2022
REPORT DATE	: 08/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	32.6	32.3	≤ 2**
pH		4500-H ⁺ B	< 0.10	7.77	7.68	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	3.60	11.13	*
Conductivity	µS/cm	2510 B	< 1.0	48,800	48,000	*
Total Dissolved Solids	mg/l	2540 C	< 25	32,660	32,600	*
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.41	5.60	≥ 4.0

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

Khemchuda Insorn

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Analyst

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(natural condition) was 32.4 °C.

5. ≥ Not less than.

6. ≤ Not more than.

7. - Not available.

8. The natural condition was normal during sampling period.



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SAMPLING DATE	: 01/06/2022	SAMPLING TIME	: 09:41-11:00
RECEIVED DATE	: 02/06/2022	ANALYTICAL DATE	: 01-02/06/2022
REPORT DATE	: 08/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Salinity	ppt	2520 B	A	32.2	≤ 10%	31.1
			B	32.2		32.2
			C	32.1		32.1
			D	32.6		32.2
			E	32.4		32.4
			F	31.8		32.0
			G	32.0		31.9

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

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Analyst

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4. ** The minimum value of salinity monitoring results in June 2021.

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6. The natural condition was normal during sampling period.



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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	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 1185/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 01/06/2022	SAMPLING TIME	: 09.41-11.00
RECEIVED DATE	: 01/06/2022	ANALYTICAL DATE	: 01/06/2022
REPORT DATE	: 08/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021
Transparency	m	Secchi Disc	A	1.2	≤ 10%	1.0
			B	1.4		1.1
			C	1.4		1.4
			D	1.3		1.3
			E	1.4		1.3
			F	2.1		1.9
			G	1.2		1.1

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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

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

3. * Notification of the National Environment Board B.E.2564 (2021).

4. ** The minimum value of transparency monitoring results in June 2021.

5. ≤10% means decrease from the natural condition by not more than 10% which were compared with the minimum value.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 1250/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 08/06/2022	SAMPLING TIME	: 09.22-10.31
RECEIVED DATE	: 09/06/2022	ANALYTICAL DATE	: 09-14/06/2022
REPORT DATE	: 14/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	32.6	32.9	33.2	32.2	32.4	-
pH		4500-H B	< 0.10	7.97	7.91	7.54	7.99	8.09	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	3.79	3.32	2.49	4.11	6.37	-
Conductivity	µS/cm	2510 B	< 1.0	48,650	49,550	48,430	48,510	45,660	-
Total Dissolved Solids	mg/l	2540 C	< 25	34,900	36,300	34,960	35,960	32,060	-
Dissolved Oxygen	mg/l	4500-G G	< 0.10	5.11	5.16	5.04	4.81	5.24	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. ≥ Not less than.

5. - Not available.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 1250/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 08/06/2022 SAMPLING TIME : 09:29-09:52
RECEIVED DATE : 09/06/2022 ANALYTICAL DATE : 09-14/06/2022
REPORT DATE : 14/06/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	32.2	32.0	≤ 2**
pH		4500-H B	< 0.10	7.86	7.98	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	4.14	4.69	
Conductivity	µS/cm	2510 B	< 1.0	48,810	49,160	
Total Dissolved Solids	mg/l	2540 C	< 25	36,460	34,900	
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.53	5.76	≥ 4.0

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

(Miss Khemchuda Insorn)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. ** ≤ 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance
(natural condition) was 32.0 °C.

5. ≥ Not less than.

6. ≤ Not more than.

7. - Not available.

8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 1250/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 08/06/2022 SAMPLING TIME : 09:22-10:31
RECEIVED DATE : 09/06/2022 ANALYTICAL DATE : 08-09/06/2022
REPORT DATE : 14/06/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Salinity	ppt	2520 B	A	31.3	≤ 10%	31.1
			B	31.6		32.2
			C	32.0		32.1
			D	32.3		32.2
			E	31.6		32.4
			F	31.6		32.0
			O	30.8		31.9

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

(Miss Khemchuda Insorn)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. ** The minimum value of salinity monitoring results in June 2021.

5. ≤ 10% means change from the minimum value by not more than 10%.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 1250/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 08/06/2022	SAMPLING TIME	: 09:22-10:31
RECEIVED DATE	: 08/06/2022	ANALYTICAL DATE	: 08/06/2022
REPORT DATE	: 14/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasomsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Transparency	m	Secchi Disc	A	1.6	< 10%	1.0
			B	1.7		1.1
			C	1.8		1.4
			D	1.5		1.3
			E	1.5		1.3
			F	2.0		1.9
			O	1.5		1.1

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

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4. ** The minimum value of transparency monitoring results in June 2021.

5. $\leq 10\%$ means decrease from the natural condition by not more than 10% which were compared with the minimum value.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 1303/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 15/06/2022	SAMPLING TIME	: 08:37-11:09
RECEIVED DATE	: 16/06/2022	ANALYTICAL DATE	: 16-24/06/2022
REPORT DATE	: 24/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasomsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	33.2	33.5	33.9	32.5	33.0	-
pH		4500-H ⁺ B	< 0.10	7.52	7.38	7.26	8.09	8.02	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	3.84	3.57	3.39	3.46	7.38	-
Conductivity	µS/cm	2510 B	< 1.0	48,320	48,370	48,400	48,230	47,090	-
Total Dissolved Solids	mg/l	2540 C	< 2.5	34,640	36,000	34,200	36,460	34,940	-
Residual Chlorine	mg/l	4500-Cl G	< 0.01	ND	ND	ND	ND	ND	≤ 0.01
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.6	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.73	5.78	5.59	5.61	5.20	≥ 4.0

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. \geq Not less than.

5. - Not available.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 1303/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 15/06/2022	SAMPLING TIME	: 08.19-08.25
RECEIVED DATE	: 16/06/2022	ANALYTICAL DATE	: 16-24/06/2022
REPORT DATE	: 24/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	32.6	32.3	< 2 **
pH		4500-H B	< 0.10	7.69	7.83	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	3.52	7.11	
Conductivity	µS/cm	2510 B	< 1.0	48,070	47,910	
Total Dissolved Solids	mg/l	2540 C	< 25	35,400	34,740	
Residual Chlorine	mg/l	4500-Cl G	< 0.01	ND	ND	≤ 0.01
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	< 1.0	
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.46	5.20	≥ 4.0

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 2017 (AWWA/APHI, WFP)

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ** ≤ 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance (natural condition) was 32.6 °C.
 5. ≥ : Not less than.
 6. ≤ : Not more than.
 7. - : Not available.
 8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 1303/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 15/06/2022	SAMPLING TIME	: 08.19-11.09
RECEIVED DATE	: 16/06/2022	ANALYTICAL DATE	: 15-16/06/2022
REPORT DATE	: 24/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021 **
Salinity	ppt	2520 B	A	31.3	≤ 10%	31.1
			B	31.4		32.2
			C	31.3		32.1
			D	31.3		32.2
			E	31.8		32.4
			I	30.9		32.0
			O	30.6		31.9

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 21st ED. 2017 (AWWA/APHI, WFP)

Khemchuda Insorn

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Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ** The minimum value of salinity monitoring results in June 2021.
 5. ≤ 10% means change from the minimum value by not more than 10%.
 6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 1303/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 15/06/2022 SAMPLING TIME : 08.19-11.09
RECEIVED DATE : 15/06/2022 ANALYTICAL DATE : 15/06/2022
REPORT DATE : 24/06/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Transparency	m	Socchi Disc	A	1.2	< 10%	1.0
			B	1.3		1.1
			C	1.4		1.4
			D	1.3		1.3
			E	1.4		1.3
			I	1.8		1.9
			O	1.0		1.1

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

(Miss Khemchuda Insorn)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. ** The minimum value of transparency monitoring results in June 2021.

5. ≤10% means decrease from the natural condition by not more than 10% which were compared with the minimum value.

6. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 1303/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 15/06/2022 SAMPLING TIME : 08.19-11.09
RECEIVED DATE : 16/06/2022 ANALYTICAL DATE : 18.20/06/2022
REPORT DATE : 24/06/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD* (Avg.+SD.)**
Suspended Solid (SS)	mg/l	2540 D	A	5.76	12.22
			B	6.14	10.78
			C	8.80	11.64
			D	6.46	13.91
			E	6.25	13.03
			I	6.40	7.51
			O	9.15	17.94

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

(Miss Khemchuda Insorn)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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3. * Notification of the National Environment Board B.E.2564 (2021).

4. ** The results should not be changed by more than the sum of the yearly average and its Standard Deviation

(Yearly average of the year 2021 was calculated from monthly samples taken at equal time interval).

5. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 1357/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 22/06/2022	SAMPLING TIME	: 10.21-11.21
RECEIVED DATE	: 23/06/2022	ANALYTICAL DATE	: 23-28/06/2022
REPORT DATE	: 28/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	32.9	32.7	33.4	32.5	32.9	-
pH	-	4500-H B	< 0.10	7.92	7.86	7.68	8.15	8.15	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	4.07	4.38	3.62	3.20	7.96	-
Conductivity	µS/cm	2510 B	< 1.0	49,860	50,120	49,710	49,960	49,670	-
Total Dissolved Solids	mg/l	2540 C	< 25	33,760	35,000	32,840	33,180	33,400	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	4.77	5.20	4.90	4.97	5.20	≥ 4.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA.PHA.WEP)

Khanchuda Insorn

(Miss Khanchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

- Remark :
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 2. This report shall not be reproduced, except in full, without official approval.
 3. Notification of the National Environment Board B.E.2564 (2021).
 4. ≥ Not less than.
 5. - Not available.
 6. The natural condition was normal during sampling period.



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SECOT CO., LTD.

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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 1357/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 22/06/2022	SAMPLING TIME	: 10.19-10.42
RECEIVED DATE	: 23/06/2022	ANALYTICAL DATE	: 23-28/06/2022
REPORT DATE	: 28/06/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD
				B	C	
Temperature	°C	2550 B	< 0.5	32.4	32.6	≤ 2 ^{**}
pH	-	4500-H B	< 0.10	7.85	7.93	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	3.83	17.70	-
Conductivity	µS/cm	2510 B	< 1.0	50,160	49,370	-
Total Dissolved Solids	mg/l	2540 C	< 25	33,760	33,940	-
Dissolved Oxygen	mg/l	4500-O G	< 0.10	5.12	5.32	≥ 4.0

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 23rd ED. 2017 (AWWA.PHA.WEP)

Khanchuda Insorn

(Miss Khanchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

- Remark :
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. * Notification of the National Environment Board B.E.2564 (2021).
 4. ** < 2 means change from natural condition not more than 2 °C. Temperature at 2,000 meter distance (natural condition) was 32.6 °C.
 5. ≥ Not less than.
 6. ≤ Not more than.
 7. - Not available.
 8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 1390/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 29/06/2022	SAMPLING TIME	: 09.40-11.48
RECEIVED DATE	: 30/06/2022	ANALYTICAL DATE	: 30/06/2022-05/07/2022
REPORT DATE	: 06/07/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION					STANDARD*
				A	D	E	I	O	
Temperature	°C	2550 B	< 0.5	32.4	32.6	32.9	32.1	32.5	*
pH		4500-H ⁺ B	< 0.10	7.79	7.57	7.40	8.14	8.08	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	3.74	6.11	4.35	0.83	7.69	*
Conductivity	µS/cm	2510 B	< 1.0	47,620	48,100	48,070	48,930	48,420	*
Total Dissolved Solids	mg/l	2540 C	< 25	34,280	35,560	36,040	36,540	35,300	*
Dissolved Oxygen	mg/l	4500-O ₂ G	< 0.10	5.47	5.13	5.35	5.26	5.67	≥ 4.0

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

Khemchuda Inorn

(Miss Khemchuda Inorn)

Analyst

M. Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: Glow SPP 3 Co., Ltd.	REQUEST SERVICE No.	: 1390/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Integrate
SAMPLING DATE	: 29/06/2022	SAMPLING TIME	: 09.55-11.37
RECEIVED DATE	: 30/06/2022	ANALYTICAL DATE	: 30/06/2022-05/07/2022
REPORT DATE	: 06/07/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION		STANDARD*
				B	C	
Temperature	°C	2550 B	< 0.5	32.2	32.0	≤ 2 ^{**}
pH		4500-H ⁺ B	< 0.10	7.85	7.92	7.0-8.5
Turbidity	NTU	2130 B	< 0.02	3.48	6.22	*
Conductivity	µS/cm	2510 B	< 1.0	48,650	48,850	*
Total Dissolved Solids	mg/l	2540 C	< 25	35,020	36,220	*
Dissolved Oxygen	mg/l	4500-O ₂ G	< 0.10	5.35	5.43	≥ 4.0

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

Khemchuda Inorn

(Miss Khemchuda Inorn)

Analyst

M. Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 5. ≥ Not less than.
 6. ≤ Not more than.
 7. - Not available.
 8. The natural condition was normal during sampling period.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Glow SPP 3 Co., Ltd. REQUEST SERVICE No. : 1357/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Integrate
SAMPLING DATE : 22/06/2022 SAMPLING TIME : 10.19-11.21
RECEIVED DATE : 23/06/2022 ANALYTICAL DATE : 22-23/06/2022
REPORT DATE : 28/06/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Salinity	ppt	2520 B	A	32.2	≤ 10%	31.1
			B	32.4		32.2
			C	32.1		32.1
			D	32.5		32.2
			E	31.9		32.4
			I	32.1		32.0
			O	31.8		31.9

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

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 4. ** The minimum value of salinity monitoring results in June 2021.
 5. ≤ 10% means change from the minimum value by not more than 10%.
 6. The natural condition was normal during sampling period.



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REPORT DATE : 28/06/2022 SITE OPERATOR : Mr. Chanatip Singkasemsak
SAMPLE CONDITION : Normal FILE CODE : 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD*	THE MINIMUM VALUE IN THE YEAR 2021**
Transparency	m	Secchi Disc	A	1.6	≤ 10%	1.0
			B	1.8		1.1
			C	1.5		1.4
			D	1.5		1.3
			E	1.5		1.3
			I	2.4		1.9
			O	1.4		1.1

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

Araya Tipparuk

(Mrs. Araya Tipparuk)

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 6. The natural condition was normal during sampling period.



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SAMPLING DATE	: 29/06/2022	SAMPLING TIME	: 09:40-11:48
RECEIVED DATE	: 30/06/2022	ANALYTICAL DATE	: 29-30/06/2022
REPORT DATE	: 06/07/2022	SITE OPERATOR	: Mr. Chanatip Singkasemsak
SAMPLE CONDITION	: Normal	FILE CODE	: 222051_CW_June

PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021
Salinity	ppt	2520 B	A	31.3	≤ 10%	31.1
			B	31.6		32.2
			C	31.8		32.1
			D	31.8		32.2
			E	31.5		32.4
			I	31.7		32.0
			O	31.3		31.9

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

(Mrs. Araya Tipparuk)

(Mrs. Araya Tipparuk)

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PARAMETER	UNIT	ANALYSIS METHODS	STATION	RESULT	STANDARD	THE MINIMUM VALUE IN THE YEAR 2021
Transparency	m	Secchi Disc	A	1.6	≤ 10%	1.0
			B	1.7		1.1
			C	1.4		1.4
			D	1.5		1.3
			E	1.4		1.2
			I	2.1		1.9
			O	1.4		1.1

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

(Mrs. Araya Tipparuk)

(Mrs. Araya Tipparuk)

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นิเวศวิทยาทางทะเล



สถานีวิจัยประมงศรีราชา

101/12 หมู่ 9 ต.บางพระ

อ.ศรีราชา จ.ชลบุรี 20110

โทร./โทรสาร. (038) 311379

รายงานผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์

ตาราง ผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 23 กุมภาพันธ์ 2565)

กลุ่ม/สกุลของแพลงก์ตอน	ปริมาณแพลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)					
	A	B	C	D	O	I
แพลงก์ตอนพืช						
Division Cyanophyta						
Class Cyanophyceae						
Order Nostocales						
Family Oscillatoriaceae						
<i>Oscillatoria</i> sp.	-	-	-	-	-	41,000
Family Nostocaceae						
<i>Pseudanabaena</i> sp.	134,000	258,000	158,000	105,000	141,000	21,000
<i>Richelia</i> sp.	27,000	-	-	-	-	-
Division Chromophyta						
Class Bacillariophyceae						
Order Biddulphales						
Suborder Coscinodiscineae						
Family Thalassiosiraceae						
<i>Cyclotella</i> sp.	596,000	368,000	97,000	347,000	133,000	500,000
<i>Lauderia</i> sp.	534,000	1,040,000	1,584,000	439,000	314,000	-
<i>Skeletonema</i> sp.	7,832,000	4,048,000	5,518,000	10,395,000	4,239,000	226,000
<i>Thalassiosira</i> sp.	418,000	414,000	106,000	157,000	157,000	21,000

ตาราง ผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 23 กุมภาพันธ์ 2565)

(ต่อ)

กลุ่ม/สกุลของแพลงก์ตอน	ปริมาณแพลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)					
	A	B	C	D	O	I
Family Melosiraceae						
<i>Paralia</i> sp.	18,000	83,000	88,000	33,000	-	27,000
Family Leptocylindraceae						
<i>Corethron</i> sp.	445,000	534,000	396,000	85,000	118,000	-
Family Coscinodiscaceae						
<i>Coscinodiscus</i> sp.	329,000	552,000	238,000	190,000	31,000	41,000
<i>Palmeria</i> sp.	-	-	-	20,000	-	-
Family Asterolampraceae						
<i>Asterolampra</i> sp.	-	-	-	-	-	7,000
<i>Asteromphalus</i> sp.	9,000	9,000	-	-	-	-
Family Heliopeltaceae						
<i>Actinopteryx</i> sp.	98,000	267,000	44,000	59,000	-	69,000
Suborder Rhizosoleniineae						
Family Rhizosoleniaceae						
<i>Dactylosolen</i> sp.	356,000	672,000	158,000	144,000	-	137,000
<i>Guinardia</i> sp.	623,000	515,000	766,000	210,000	290,000	-
<i>Proboscia</i> sp.	223,000	294,000	704,000	131,000	39,000	-
<i>Pseudosolenia</i> sp.	-	-	9,000	524,000	-	27,000
<i>Rhizosolenia</i> sp.	650,000	1,104,000	880,000	498,000	259,000	82,000
Suborder Biddulphiineae						
Family Hemiaulaceae						
<i>Cerataulina</i> sp.	116,000	304,000	528,000	197,000	-	-
<i>Climacodium</i> sp.	36,000	74,000	-	-	-	-
<i>Eucampia</i> sp.	-	138,000	-	-	-	-
<i>Hemiaulus</i> sp.	142,000	230,000	114,000	164,000	-	-
Family Cymatosiraceae						
<i>Cymatosira</i> sp.	62,000	166,000	-	66,000	118,000	-

ตาราง ผลการวิเคราะห์แฟลกก์ตอนพืชและแฟลกก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 23 กุมภาพันธ์ 2565)

กลุ่ม/สกุลของแฟลกก์ตอน	(ต่อ)					
	ปริมาณแฟลกก์ตอน (หน่วยต่อลูกบาศก์เมตร)					
	A	B	C	D	O	I
Family Chaetoceraceae						
<i>Bacteriastrum</i> sp.	169,000	672,000	440,000	308,000	47,000	-
<i>Chaetoceros</i> sp.	68,174,000	102,488,000	138,160,000	39,431,000	141,300,000	363,000
Family Lithodesmaceae						
<i>Bellerochea</i> sp.	98,000	-	-	-	-	-
<i>Ditylum</i> sp.	116,000	212,000	70,000	-	24,000	-
<i>Helicotheca</i> sp.	712,000	469,000	1,118,000	609,000	126,000	21,000
Family Eupodiscaceae						
<i>Odontella</i> sp.	53,000	74,000	53,000	170,000	47,000	21,000
Order Bacillariales						
Suborder Fragilariineae						
Family Rhaphoneidaceae						
<i>Rhaphoneis</i> sp.	-	-	-	13,000	-	-
Family Thalassionemataceae						
<i>Thalassionema</i> sp.	35,956,000	29,072,000	52,448,000	19,519,000	40,663,000	34,000
Family Licmophoriaceae						
<i>Licmophora</i> sp.	142,000	-	18,000	-	-	-
Suborder Bacillariineae						
Family Lyrellaceae						
<i>Lyrella</i> sp.	-	-	-	7,000	-	-
Family Naviculaceae						
<i>Amphora</i> sp.	774,000	856,000	1,346,000	701,000	471,000	-
<i>Diploneis</i> sp.	89,000	-	26,000	151,000	8,000	27,000
<i>Haslea</i> sp.	401,000	138,000	141,000	-	39,000	-
<i>Meunier</i> sp.	-	-	-	26,000	-	21,000
<i>Navicula</i> sp.	53,000	-	-	79,000	-	-
<i>Pinnularia</i> sp.	-	-	-	7,000	16,000	-
<i>Pleurosigma</i> sp.	45,000	101,000	97,000	177,000	236,000	-

ตาราง ผลการวิเคราะห์แฟลกก์ตอนพืชและแฟลกก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 23 กุมภาพันธ์ 2565)

กลุ่ม/สกุลของแฟลกก์ตอน	(ต่อ)					
	ปริมาณแฟลกก์ตอน (หน่วยต่อลูกบาศก์เมตร)					
	A	B	C	D	O	I
<i>Trachyneis</i> sp.	62,000	-	-	72,000	-	34,000
Family Bacillariaceae						
<i>Bacillaria</i> sp.	116,000	64,000	-	-	-	41,000
<i>Cylindrotheca</i> sp.	472,000	120,000	246,000	216,000	141,000	-
<i>Nitzschia</i> sp.	-	83,000	44,000	79,000	-	-
<i>Tyblionella</i> sp.	-	-	-	59,000	-	-
<i>Pseudo-nitzschia</i> sp.	632,000	2,088,000	1,056,000	-	149,000	-
Family Sarirellaceae						
<i>Cympylodiscus</i> sp.	-	-	-	-	-	7,000
Class Dictyochophyceae						
Order Dictyochales						
Family Dictyochophyceae						
<i>Dictyocha</i> sp.	107,000	28,000	132,000	20,000	79,000	14,000
Class Dinophyceae						
Order Prorocentrales						
Family Prorocentraceae						
<i>Prorocentrum</i> sp.	9,000	276,000	150,000	-	-	7,000
Order Gymnodiniales						
Family Gymnodinium						
<i>Gyrodinium</i> sp.	9,000	-	70,000	-	-	-
Order Gonyaulacalea						
Family Ceratiaceae						
<i>Ceratium</i> sp.	160,000	92,000	-	66,000	31,000	7,000
Family Goniodomaceae						
<i>Goniodoma</i> sp.	-	350,000	-	-	-	-
Family Gonyaulacaceae						
<i>Gonyaulax</i> sp.	36,000	-	35,000	-	-	-

ตาราง ผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 23 กุมภาพันธ์ 2565)
(ต่อ)

กลุ่ม/สกุลของแพลงก์ตอน	ปริมาณแพลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)					
	A	B	C	D	O	I
Family Pyrophacaceae						
<i>Pyrophacus</i> sp.	27,000	28,000	9,000	52,000	16,000	-
Order Peridiniales						
Family Peridiniaceae						
<i>Peridinium</i> sp.	952,000	18,000	-	-	-	-
Family Podolampadaceae						
<i>Podolampas</i> sp.	18,000	-	-	-	-	-
Family Proto-peridiniaceae						
<i>Proto-peridinium</i> sp.	579,000	543,000	466,000	393,000	-	89,000
แพลงก์ตอนสัตว์						
Phylum Protozoa						
Subphylum Plasmodroma						
Class Sarcodina						
Subclass Rhizopoda						
Order Testacida						
Family Diffugiidae						
<i>Diffugia</i> sp.	-	9,000	9,000	-	-	-
Order Foraminiferida						
<i>Globorotalia</i> sp.	-	-	-	7,000	8,000	-
Subphylum Ciliophora						
Class Ciliata						
Subclass Spirotricha						
Order Tintinnida						
Family Codonellidae						
<i>Tintinnopsis</i> sp.	151,000	120,000	185,000	124,000	165,000	7,000
Family Codonellopsidae						
<i>Codonellopsis</i> sp.	-	-	-	20,000	8,000	-
<i>Stenosemella</i> sp.	-	-	-	13,000	-	7,000

ตาราง ผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 23 กุมภาพันธ์ 2565)
(ต่อ)

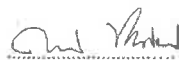
กลุ่ม/สกุลของแพลงก์ตอน	ปริมาณแพลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)					
	A	B	C	D	O	I
Family Coxiellidae						
<i>Helicostomella</i> sp.	9,000	-	-	7,000	-	7,000
Family Cyttarocylidae						
<i>Favella</i> sp.	9,000	-	-	-	-	-
Family Petalotrichidae						
<i>Metacylis</i> sp.	-	-	-	-	-	7,000
Family Tintinnidae						
<i>Amphorella</i> sp.	9,000	-	9,000	13,000	8,000	-
<i>Eutintinnus</i> sp.	-	-	-	-	8,000	-
Subclass Peritricha						
Order Peritrichida						
<i>Vorticella</i> sp.	-	-	-	-	-	21,000
Phylum Rotifera						
Class Monogononta						
Order Ploima						
Family Tricocercidae						
<i>Trichocerca</i> sp.	-	-	-	13,000	-	-
Phylum Annelida						
Class Polychaeta						
Polychaete larvae	9,000	-	9,000	236,000	39,000	7,000
Phylum Arthropoda						
Class Crustacea						
Subclass Copepoda						
Copepod nauplius	409,000	313,000	625,000	544,000	479,000	384,000
Order Calanoida						
Calanoid copepod	62,000	18,000	44,000	98,000	79,000	89,000
Order Cyclopoida						
Cyclopoid copepod	18,000	-	9,000	-	47,000	21,000

ตาราง ผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 23 กุมภาพันธ์ 2565)

กลุ่ม/สกุลของแพลงก์ตอน	ปริมาณแพลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)					
	A	B	C	D	O	I
Order Harpacticoida						
Harpacticoid copepod	18,000	28,000	9,000	39,000	8,000	-
Phylum Mollusca						
Class Gastropoda						
Gastropod larvae	-	-	-	-	-	7,000
Class Bivalvia						
Pelecypod larvae	-	-	-	20,000	-	-
Phylum Echinodermata						
Class Echinoidae						
Echinopluteus larvae	-	-	-	7,000	-	-
Phylum Chordata						
Subphylum Urochordata						
Class Larvacea						
Family Oikopleuridae						
<i>Oikopleura</i> sp.	80,000	9,000	53,000	7,000	16,000	14,000
ชนิดของแพลงก์ตอนพืช	45	39	36	39	27	25
ชนิดของแพลงก์ตอนสัตว์	10	6	9	14	11	11
ชนิดแพลงก์ตอนรวม	55	45	45	53	38	36
ปริมาณแพลงก์ตอนพืช	122,609,000	148,842,000	207,513,000	75,919,000	189,232,000	1,885,000
ปริมาณแพลงก์ตอนสัตว์	774,000	497,000	952,000	1,148,000	865,000	571,000
ปริมาณแพลงก์ตอนรวม	123,383,000	149,339,000	208,465,000	77,067,000	190,097,000	2,456,000

ตาราง ผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 23 กุมภาพันธ์ 2565)

กลุ่ม/สกุลของแพลงก์ตอน	ปริมาณแพลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)					
	A	B	C	D	O	I
ค่าดัชนีความหลากหลาย	1.36	1.17	1.03	1.45	0.74	2.46
แพลงก์ตอนพืช						
ค่าดัชนีความหลากหลาย	1.47	1.06	1.12	1.66	1.45	1.21
แพลงก์ตอนสัตว์						
ค่าดัชนีความสม่ำเสมอ	0.36	0.32	0.29	0.40	0.22	0.76
แพลงก์ตอนพืช						
ค่าดัชนีความสม่ำเสมอ	0.64	0.59	0.51	0.63	0.60	0.50
แพลงก์ตอนสัตว์						


(นางสาวกนกวรรณ ขาวค่อม)
ผู้วิเคราะห์


(นายอลงกต อินทรชาติ)
หัวหน้าสถานีวิจัยประมงศรีราชา



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

รายงานผลการวิเคราะห์สัตว์หน้าดิน

ตาราง ผลการวิเคราะห์สัตว์หน้าดิน (เก็บตัวอย่างวันที่ 23 กุมภาพันธ์ 2565)

ชนิดสัตว์หน้าดิน	ปริมาณสัตว์หน้าดิน (ตัวต่อตารางเมตร)					
	A	B	C	D	O	I
Phylum Annelida						
Class Polychaeta						
Order Aciculata						
Family Amphinomidae						
<i>Linopherus</i> sp. (ไส้เดือนทะเล)	-	-	-	15	-	-
Order Capitellida						
Family Capitellidae						
<i>Capitella</i> sp. (ไส้เดือนทะเล)	15	-	-	-	-	-
Family Maldanidae						
<i>Euchymene</i> sp. (ไส้เดือนทะเล)	30	-	-	15	-	15
Order Eunicida						
Family Eunicidae						
<i>Marphysa</i> sp. (ไส้เดือนทะเล)	-	-	-	-	45	-
Order Orbiniida						
Family Orbiniidae						
<i>Scoloplos</i> sp. (ไส้เดือนทะเล)	15	-	-	-	-	-

ตาราง ผลการวิเคราะห์สัตว์หน้าดิน (เก็บตัวอย่างวันที่ 23 กุมภาพันธ์ 2565) (ต่อ)

ชนิดสัตว์หน้าดิน	ปริมาณสัตว์หน้าดิน (ตัวต่อตารางเมตร)					
	A	B	C	D	O	I
Order Phyllodocida						
Family Nereididae						
<i>Neanthes</i> sp. (ไส้เดือนทะเล)	-	-	-	-	15	-
Order Terebellida						
Family Terebellidae						
<i>Lanice</i> sp. (ไส้เดือนทะเล)	-	-	-	-	15	-
Order Spionida						
Family Magelonidae						
<i>Magelona</i> sp. (ไส้เดือนทะเล)	15	-	-	-	-	15
Phylum Arthropoda						
Class Malacostraca						
Order Amphipoda						
Family Ampeliscidae						
<i>Ampelisca</i> sp. (แอมพีพอด)	-	-	-	-	15	-
Order Decapoda						
Family Galenidae						
<i>Galene</i> sp. (ปูก้ามขาว)	-	15	-	-	-	-
Family Leucosiidae						
<i>Leucosia</i> sp. (ปูกระดุม)	-	15	-	-	-	-
Order Tanaidacea						
Family Leptocheliidae						
<i>Leptochelia</i> sp. (ทาลันดาเซียน)	-	-	-	-	15	-
Phylum Mollusca						
Class Gastropoda						
Order Littorinimorpha						
Family Naticidae						
<i>Natica</i> sp. (หอยฝาเดียวชนิดหนึ่ง)	-	-	-	15	-	-

ตาราง ผลการวิเคราะห์สัตว์หน้าดิน (เก็บตัวอย่างวันที่ 23 กุมภาพันธ์ 2565) (ต่อ)

ชนิดสัตว์หน้าดิน	ปริมาณสัตว์หน้าดิน (ตัวต่อตารางเมตร)					
	A	B	C	D	O	I
Class Bivalvia						
Order Cardiida						
Family Tellinidae						
<i>Tellina</i> sp. (หอยสองฝาชนิดหนึ่ง)	15	30	-	30	-	-
Order Myida						
Family Corbulidae						
<i>Corbula</i> sp. (หอยสองฝาชนิดหนึ่ง)	-	-	30	-	-	-
Phylum Chordata						
Class Leptocardii						
Order Amphioxiformes						
Family Branchiostomatidae						
<i>Branchiostoma</i> sp. (แอมฟิออกซัส)	-	30	-	-	-	-
ชนิดสัตว์หน้าดิน	5	4	1	4	5	2
ปริมาณสัตว์หน้าดิน	90	90	30	75	105	30
ค่าดัชนีความหลากหลายสัตว์หน้าดิน	1.5607	1.3297	0.0000	1.3322	1.4751	0.6931

สุเมธ กัณหา

(นายอรรถวุฒิ กัณหาวงศ์)

ผู้วิเคราะห์

อ. อ. อ.

(นายอรรถวุฒิ กัณหาวงศ์)

หัวหน้าสถานีวิจัยประมงศรีราชา



สถานีวิจัยประมงศรีราชา

101/12 หมู่ 9 ต. บางพระ

อ. ศรีราชา จ. ชลบุรี 20110

โทร./โทรสาร. (038) 311379

รายงานผลการวิเคราะห์ไขและตัวอ่อน

ตาราง ผลการวิเคราะห์ไขและตัวอ่อน (เก็บตัวอย่างวันที่ 23 กุมภาพันธ์ 2565)

กลุ่มของตัวอ่อน	ปริมาณแพลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)	
	B	I
Phylum Annelida		
Class Polychaeta		
Polychaete larvae (ตัวอ่อนไส้เดือนทะเล)	-	7,000
Phylum Arthropoda		
Class Crustacea		
Subclass Copepoda		
Copepod nauplius (ตัวอ่อนโคพีพอดระยะนาอูปเลียส)	313,000	384,000
Phylum Mollusca		
Class Gastropoda		
Gastropod larvae (ตัวอ่อนหอยฝาเดียว)	-	7,000
ชนิดตัวอ่อน	1	3
ปริมาณตัวอ่อน	313,000	398,000

นางสาวกนกวรรณ ขาวค่อน

(นางสาวกนกวรรณ ขาวค่อน)

ผู้วิเคราะห์

อ. อ. อ.

(นายอรรถวุฒิ กัณหาวงศ์)

หัวหน้าสถานีวิจัยประมงศรีราชา



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

รายงานผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์

ตาราง ผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 25 พฤษภาคม 2565)

กลุ่ม/สกุลของแพลงก์ตอน	ปริมาณแพลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)					
	A	B	C	D	O	I
แพลงก์ตอนพืช						
Division Cyanophyta						
Class Cyanophyceae						
Order Nostocales						
Family Oscillatoriaceae						
<i>Oscillatoria</i> sp.	272,000	183,000	177,000	273,000	203,000	629,000
Family Nostocaceae						
<i>Pseudanabaena</i> sp.	99,000	58,000	56,000	253,000	-	296,000
<i>Richelia</i> sp.	-	241,000	437,000	10,000	-	56,000
Division Chlorophyta						
Class Chlorophyceae						
Order Chlorococcales						
Family Hydrodictyaceae						
<i>Pediastrum</i> sp.	-	10,000	-	-	-	-
Family Scenedesmaceae						
<i>Scenedesmus</i> sp.	-	-	19,000	-	102,000	-

ตาราง ผลการวิเคราะห์แพลงก์ตอนพืชและแพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 25 พฤษภาคม 2565)

(ต่อ)

กลุ่ม/สกุลของแพลงก์ตอน	ปริมาณแพลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)					
	A	B	C	D	O	I
Division Chromophyta						
Class Bacillariophyceae						
Order Biddulphales						
Suborder Coscinodiscineae						
Family Thalassiosiraceae						
<i>Cyclotella</i> sp.	248,000	704,000	550,000	657,000	680,000	601,000
<i>Lauderia</i> sp.	66,000	29,000	-	-	112,000	176,000
<i>Skeletonema</i> sp.	-	-	-	-	91,000	-
<i>Thalassiosira</i> sp.	-	97,000	19,000	-	-	-
Family Melosiraceae						
<i>Paralia</i> sp.	50,000	48,000	84,000	111,000	-	56,000
Family Aulacoseiraceae						
<i>Aulacoseira</i> sp.	8,000	-	-	-	-	-
Family Leptocyliodraceae						
<i>Corethron</i> sp.	-	-	19,000	-	30,000	37,000
Family Coscinodiscaceae						
<i>Coscinodiscus</i> sp.	-	19,000	37,000	141,000	61,000	74,000
Family Asterolampraceae						
<i>Asterionellopsis</i> sp.	-	-	-	152,000	51,000	-
<i>Asterolampra</i> sp.	-	-	-	-	10,000	-
<i>Asteromphalus</i> sp.	8,000	-	28,000	-	10,000	-
Family Heliopeltaceae						
<i>Actinopterychus</i> sp.	8,000	10,000	-	61,000	-	-
Suborder Rhizosolenineae						
Family Rhizosoleniaceae						
<i>Dactyliosolen</i> sp.	83,000	58,000	307,000	333,000	538,000	111,000
<i>Guinardia</i> sp.	718,000	193,000	1,860,000	2,222,000	1,015,000	860,000
<i>Proboscía</i> sp.	107,000	48,000	251,000	162,000	386,000	93,000

ตาราง ผลการวิเคราะห์เพลงก่ตอนพืชและเพลงก่ตอนสัตว์ (เก็บตัวอย่างวันที่ 25 พฤษภาคม 2565)

กลุ่ม/สกุลของเพลงก่ตอน	(ต่อ)					
	ปริมาณเพลงก่ตอน (หน่วยต่อลูกบาศก์เมตร)					
	A	B	C	D	O	I
<i>Pseudosolenia</i> sp.	17,000	48,000	298,000	71,000	61,000	185,000
<i>Rhizosolenia</i> sp.	825,000	1,930,000	1,488,000	677,000	1,624,000	675,000
Suborder Biddulphiineae						
Family Hemiaulaceae						
<i>Cerataulina</i> sp.	91,000	125,000	102,000	283,000	406,000	167,000
<i>Climacodium</i> sp.	140,000	-	28,000	61,000	10,000	56,000
<i>Eucampia</i> sp.	-	-	-	-	30,000	-
<i>Hemiaulus</i> sp.	388,000	261,000	679,000	283,000	477,000	638,000
Family Cymatosiraceae						
<i>Cymatosira</i> sp.	99,000	87,000	279,000	404,000	558,000	120,000
Family Biddulphiaceae						
<i>Biddulphia</i> sp.	-	-	9,000	-	-	-
Family Chaetoceraceae						
<i>Bacteriastrium</i> sp.	990,000	1,062,000	1,553,000	677,000	1,218,000	620,000
<i>Chaetoceros</i> sp.	3,630,000	3,667,000	5,022,000	3,636,000	6,699,000	2,775,000
Family Lithodesmaceae						
<i>Helicotheca</i> sp.	-	174,000	-	-	-	-
Family Eupodiscaceae						
<i>Odontella</i> sp.	165,000	270,000	419,000	303,000	71,000	231,000
<i>Triceratium</i> sp.	-	-	-	10,000	-	28,000
Order Bacillariales						
Suborder Fragilariineae						
Family Frangilariaceae						
<i>Synedra</i> sp.	-	10,000	-	10,000	-	-
Family Rhaphoneidaceae						
<i>Rhaphoneis</i> sp.	17,000	29,000	-	-	-	83,000
Family Thalassionemataceae						
<i>Thalassionema</i> sp.	13,118,000	16,791,000	37,014,000	12,524,000	23,548,000	9,990,000

ตาราง ผลการวิเคราะห์เพลงก่ตอนพืชและเพลงก่ตอนสัตว์ (เก็บตัวอย่างวันที่ 25 พฤษภาคม 2565)

กลุ่ม/สกุลของเพลงก่ตอน	(ต่อ)					
	ปริมาณเพลงก่ตอน (หน่วยต่อลูกบาศก์เมตร)					
	A	B	C	D	O	I
Family Tabellariaceae						
<i>Tabellaria</i> sp.	-	39,000	37,000	-	-	-
Family Licmophoriaceae						
<i>Licmophora</i> sp.	-	-	19,000	-	-	-
Family Striatellaceae						
<i>Grammatophora</i> sp.	-	-	-	-	-	28,000
<i>Striatella</i> sp.	66,000	174,000	37,000	121,000	355,000	46,000
Suborder Bacillariineae						
Family Achnantheae						
<i>Achnanthes</i> sp.	-	-	9,000	-	-	19,000
Family Lyrellaceae						
<i>Lyrella</i> sp.	-	-	186,000	152,000	20,000	46,000
Family Naviculaceae						
<i>Amphora</i> sp.	124,000	116,000	372,000	384,000	71,000	435,000
<i>Diploneis</i> sp.	33,000	125,000	353,000	101,000	132,000	167,000
<i>Haslea</i> sp.	74,000	251,000	93,000	91,000	41,000	37,000
<i>Meunier</i> sp.	83,000	68,000	-	-	-	56,000
<i>Navicula</i> sp.	17,000	58,000	47,000	111,000	-	93,000
<i>Pinnularia</i> sp.	-	-	19,000	-	20,000	28,000
<i>Pleurosigma</i> sp.	91,000	318,000	28,000	879,000	183,000	370,000
<i>Trachymeis</i> sp.	25,000	97,000	9,000	-	-	19,000
Family Bacillariaceae						
<i>Cylindrotheca</i> sp.	437,000	290,000	74,000	475,000	5,684,000	333,000
<i>Nitzschia reversa</i>	-	-	-	-	20,000	-
<i>Nitzschia</i> sp.	495,000	579,000	112,000	606,000	944,000	305,000
<i>Pseudo-nitzschia</i> sp.	157,000	386,000	121,000	354,000	1,421,000	648,000
<i>Tryblionella</i> sp.	8,000	-	-	51,000	-	-

ตาราง ผลการวิเคราะห์แฟลงก์ตอนพืชและแฟลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 25 พฤษภาคม 2565)

(ต่อ)

กลุ่ม/สกุลของแฟลงก์ตอน	ปริมาณแฟลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)					
	A	B	C	D	O	I
Family Surirellaceae						
<i>Entomoneis</i> sp.	33,000	48,000	37,000	20,000	51,000	102,000
<i>Surirella</i> sp.	8,000	39,000	47,000	40,000	51,000	37,000
Class Dinophyceae						
Order Prorocentrales						
Family Prorocentraceae						
<i>Prorocentrum</i> sp.	8,000	-	-	-	-	-
Order Dinophysiales						
Family Dinophysiaceae						
<i>Phalacroma</i> sp.	50,000	-	-	-	-	9,000
Order Gymnodiniales						
Family Gymnodinium						
<i>Gymnodinium</i> sp.	8,000	29,000	-	-	-	-
Order Gonyaulacalea						
Family Ceratiaceae						
<i>Ceratium</i> sp.	-	10,000	28,000	51,000	-	56,000
Family Cladopyxidaceae						
<i>Cladopyxis</i> sp.	-	-	-	-	-	9,000
Family Pyrophacaceae						
<i>Pyrophacus</i> sp.	66,000	-	9,000	20,000	41,000	-
Order Peridinales						
Family Calciadinellaceae						
<i>Scripsiella</i> sp.	-	29,000	-	-	81,000	19,000
Family Peridiniaceae						
<i>Peridinium</i> sp.	-	-	-	-	81,000	-
Family Protoperidiniaceae						
<i>Protoperidinium</i> sp.	41,000	106,000	167,000	202,000	162,000	157,000

ตาราง ผลการวิเคราะห์แฟลงก์ตอนพืชและแฟลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 25 พฤษภาคม 2565)

(ต่อ)

กลุ่ม/สกุลของแฟลงก์ตอน	ปริมาณแฟลงก์ตอน (หน่วยต่อลูกบาศก์เมตร)					
	A	B	C	D	O	I
แฟลงก์ตอนสัตว์						
Phylum Protozoa						
Subphylum Plasmodroma						
Class Sarcodina						
Subclass Rhizopoda						
Order Testacida						
Family Diffugiidae						
<i>Diffugia</i> sp.	-	10,000	-	-	-	-
Order Foraminiferida						
<i>Globorotalia</i> sp.	25,000	10,000	-	41,000	-	9,000
Subphylum Ciliophora						
Class Ciliata						
Subclass Spirotricha						
Order Tintinnida						
Family Tintinnididae						
<i>Leptotintinnus</i> sp.	50,000	48,000	74,000	30,000	10,000	37,000
Family Codonellidae						
<i>Tintinnopsis</i> sp.	66,000	154,000	121,000	81,000	102,000	148,000
Family Codonellopsidae						
<i>Codonellopsis</i> sp.	-	-	-	30,000	10,000	-
<i>Stenosemella</i> sp.	91,000	48,000	19,000	30,000	20,000	19,000
Family Petalotrichidae						
<i>Metacylis</i> sp.	-	-	28,000	10,000	41,000	19,000
Family Tintinnidae						
<i>Amphorella</i> sp.	-	-	9,000	10,000	-	9,000
<i>Eutintinnus</i> sp.	-	10,000	-	61,000	30,000	9,000

ตาราง ผลการวิเคราะห์แหล่งกักตุนพืชและแหล่งกักตุนสัตว์ (เก็บตัวอย่างวันที่ 25 พฤษภาคม 2565)

กลุ่ม/สกุลของแหล่งกักตุน	ปริมาณแหล่งกักตุน (หน่วยต่อลูกบาศก์เมตร)					
	A	B	C	D	O	I
Subclass Peritricha						
Order Peritrichida						
<i>Vorticella</i> sp.	50,000	-	-	-	-	19,000
<i>Zoothamnium</i> sp.	-	-	19,000	-	-	-
Phylum Rotifera						
Class Monogononta						
Order Ploima						
Family Lacane						
<i>Lecane</i> sp.	8,000	10,000	-	-	-	19,000
Phylum Annelida						
Class Polychaeta						
Polychaete larvac	33,000	10,000	19,000	10,000	-	19,000
Phylum Arthropoda						
Class Crustacea						
Subclass Copepoda						
Copepod nauplius	99,000	58,000	93,000	192,000	61,000	157,000
Order Calanoida						
Calanoid copepod	17,000	10,000	9,000	-	10,000	28,000
Order Cyclopoida						
Cyclopoid copepod	8,000	-	19,000	-	-	28,000
Order Harpacticoida						
Harpacticoid copepod	8,000	-	-	-	10,000	-
Phylum Mollusca						
Class Bivalvia						
Pelecypod larvae	8,000	19,000	9,000	10,000	41,000	19,000

ตาราง ผลการวิเคราะห์แหล่งกักตุนพืชและแหล่งกักตุนสัตว์ (เก็บตัวอย่างวันที่ 25 พฤษภาคม 2565)

กลุ่ม/สกุลของแหล่งกักตุน	ปริมาณแหล่งกักตุน (หน่วยต่อลูกบาศก์เมตร)					
	A	B	C	D	O	I
Phylum Chordata						
Subphylum Urochordata						
Class Larvacea						
Family Oikopleuridae						
<i>Oikopleura</i> sp.	-	10,000	-	-	-	9,000
ชนิดของแหล่งกักตุนพืช	41	43	44	39	41	45
ชนิดของแหล่งกักตุนสัตว์	12	12	11	11	10	15
ชนิดแหล่งกักตุนรวม	53	55	55	50	51	60
ปริมาณแหล่งกักตุนพืช	22,971,000	28,914,000	52,539,000	26,972,000	47,349,000	21,576,000
ปริมาณแหล่งกักตุนสัตว์	463,000	397,000	419,000	505,000	335,000	548,000
ปริมาณแหล่งกักตุนรวม	23,434,000	29,311,000	52,958,000	27,477,000	47,684,000	22,124,000
ค่าดัชนีความหลากหลาย	1.7570	1.7969	1.3622	2.2052	1.9187	2.2992
แหล่งกักตุนพืช						
ค่าดัชนีความหลากหลาย	2.1557	1.9538	1.9884	1.9342	1.9900	2.1669
แหล่งกักตุนสัตว์						
ค่าดัชนีความสม่ำเสมอ	0.4731	0.4777	0.3600	0.6019	0.5167	0.6040
แหล่งกักตุนพืช						
ค่าดัชนีความสม่ำเสมอ	0.8675	0.7863	0.8292	0.8066	0.8642	0.8002
แหล่งกักตุนสัตว์						

(นางสาวกนกวรรณ ขาวด่อน)

ผู้วิเคราะห์

(นายอลงกต อินทรชาติ)

หัวหน้าสถานีวิจัยประมงศรีราชา



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

รายงานผลการวิเคราะห์สัตว์หน้าดิน

ตาราง ผลการวิเคราะห์สัตว์หน้าดิน (เก็บตัวอย่างวันที่ 25 พฤษภาคม 2565)

ชนิดสัตว์หน้าดิน	ปริมาณสัตว์หน้าดิน (ตัวต่อตารางเมตร)					
	A	B	C	D	O	I
Phylum Annelida						
Class Polychaeta						
Order Capitellida						
Family Maldanidae						
<i>Euchymene</i> sp. (ไส้เดือนทะเล)	-	-	-	30	-	-
Order Eunicida						
Family Eunicidae						
<i>Marphysa</i> sp. (ไส้เดือนทะเล)	-	15	89	-	15	-
Family Onuphidae						
<i>Diopatra</i> sp. (ไส้เดือนทะเล)	-	-	15	-	-	-
Order Orbiniida						
Family Orbiniidae						
<i>Scoloplos</i> sp. (ไส้เดือนทะเล)	-	45	-	-	-	-
Order Phyllodocida						
Family Glyceridae						
<i>Glycera</i> sp. (ไส้เดือนทะเล)	15	-	-	-	-	-
Family Polynoidae						
<i>Harmothoe</i> sp. (ไส้เดือนทะเล)	-	-	-	-	-	15
<i>Lepidonotus</i> sp. (ไส้เดือนทะเล)	-	-	-	15	-	-

ตาราง ผลการวิเคราะห์สัตว์หน้าดิน (เก็บตัวอย่างวันที่ 25 พฤษภาคม 2565) (ต่อ)

ชนิดสัตว์หน้าดิน	ปริมาณสัตว์หน้าดิน (ตัวต่อตารางเมตร)					
	A	B	C	D	O	I
Phylum Arthropoda						
Class Malacostraca						
Order Decapoda						
Family Diogenidae						
<i>Diogenes</i> sp. (ปูเสฉวน)	15	-	-	-	-	-
Family Portunidae						
<i>Portunus</i> sp. (ปูม้า)	-	15	-	-	-	-
Phylum Mollusca						
Class Bivalvia						
Order Cardiida						
Family Tellinidae						
<i>Tellina</i> sp. (หอยสองฝาชนิดหนึ่ง)	-	-	-	-	-	30
Order Venerida						
Family Veneridae						
<i>Redicirce</i> sp. (หอยสองฝาชนิดหนึ่ง)	-	-	-	-	-	15
Phylum Echinodermata						
Class Holothuroidea						
Order Holothuriida						
Family Holothuriidae						
<i>Holothuria</i> sp. (ปลิงทะเล)	-	-	15	-	-	-
Phylum Chordata						
Class Leptocardii						
Order Amphioxiformes						
Family Branchiostomatidae						
<i>Branchiostoma</i> sp. (แมมฟ็อกซัส)	15	-	-	-	-	-

ตาราง ผลการวิเคราะห์สัตว์หน้าดิน (เก็บตัวอย่างวันที่ 25 พฤษภาคม 2565) (ต่อ)

ชนิดสัตว์หน้าดิน	ปริมาณสัตว์หน้าดิน (ตัวต่อตารางเมตร)					
	A	B	C	D	O	I
ชนิดสัตว์หน้าดิน	3	3	3	2	1	3
ปริมาณสัตว์หน้าดิน	45	75	119	45	15	60
ค่าดัชนีความหลากหลายสัตว์หน้าดิน	1.0986	0.9503	0.7394	0.6365	0.0000	1.0397

ดร. กฤษณ์ กิ่งทอง
(นายอรรถวุฒิ กิ่งทองวงศ์)
ผู้วิเคราะห์

ดร. อธิวัฒน์ อธิวัฒน์
(นายอลงกต อินทรชาติ)
หัวหน้าสถานีวิจัยประมงศรีราชา



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

รายงานผลการวิเคราะห์ไข่และตัวอ่อน

ตาราง ผลการวิเคราะห์ไข่และตัวอ่อน (เก็บตัวอย่างวันที่ 25 พฤษภาคม 2565)

กลุ่มของตัวอ่อน	ปริมาณแหล่งที่ตอน (หน่วยต่อลูกบาศก์เมตร)	
	B	I
Phylum Annelida		
Class Polychaeta		
Polychaete larvae (ตัวอ่อนไส้เดือนทะเล)	10,000	19,000
Phylum Arthropoda		
Class Crustacea		
Subclass Copepoda		
Copepod nauplii (ตัวอ่อนโคพีพอดระยะนาอูปเลียส)	58,000	157,000
Phylum Mollusca		
Class Bivalvia		
Velocypod larvae (ตัวอ่อนหอยสองฝา)	19,000	19,000
ชนิดตัวอ่อน	3	3
ปริมาณตัวอ่อน	87,000	195,000

นางสาวกนกวรรณ ขาวค่อน
ผู้วิเคราะห์

ดร. อธิวัฒน์ อธิวัฒน์
(นายอลงกต อินทรชาติ)
หัวหน้าสถานีวิจัยประมงศรีราชา

ภาคผนวก จ

ใบตรวจเทียบเครื่องมือการตรวจวัด

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Part Number: E04NI99E15AC084 Reference Number: 82-401409170-1
Cylinder Number: EB0108319 Cylinder Volume: 144.4 CF
Laboratory: 124 - Riverton (SAP) - NJ Cylinder Pressure: 2015 PSIG
PGVP Number: B52019 Valve Outlet: 660
Gas Code: CO,NO,NOX,SO2,BALN Certification Date: Feb 05, 2019

Expiration Date: Feb 05, 2023

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 800/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS					
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
NOX	50.00 PPM	50.93 PPM	G1	+/- 1.4% NIST Traceable	01/28/2019, 02/05/2019
NITRIC OXIDE	50.00 PPM	50.82 PPM	G1	+/- 1.4% NIST Traceable	01/28/2019, 02/05/2019
SULFUR DIOXIDE	50.00 PPM	48.82 PPM	G1	+/- 1.0% NIST Traceable	01/28/2019, 02/05/2019
CARBON MONOXIDE	0.5000 %	0.5040 %	G1	+/- 1.1% NIST Traceable	01/31/2019
NITROGEN	Balance				

CALIBRATION STANDARDS					
Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	13060205	CC401947	4950 PPM CARBON MONOXIDE/NITROGEN	+/- 0.4%	Feb 15, 2019
PRM	12387	APEX1099237	9.82 PPM NITROGEN DIOXIDE/AIR	+/- 2.0%	Jun 02, 2017
NTRM	12010724	KAL004497	50.03 PPM NITRIC OXIDE/NITROGEN	+/- 0.8%	Mar 12, 2024
GMIS	1114201601	CC506710	4.971 PPM NITROGEN DIOXIDE/NITROGEN	+/- 2.0%	Nov 14, 2019
NTRM	14010327	KAL004376	49.08 PPM SULFUR DIOXIDE/NITROGEN	+/- 1.0%	Apr 17, 2024

The SRM, PRM or RQM noted above is only in reference to the GMIS used in the assay and not part of the analysis.

ANALYTICAL EQUIPMENT		
Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Siemens Ultramat 6 J3-589 COHIGH	NDIR	Jan 18, 2019
Nicolet 6700 APW1100391 NO	FTIR	Jan 10, 2019
Nicolet 6700 APW1100391 NO2	FTIR	Jan 10, 2019
Nicolet 6700 APW1100391 SO2	FTIR	Jan 10, 2019

Triad Data Available Upon Request

PERMANENT NOTES: PRODUCED IN ACCORDANCE WITH ISO17025 REQUIREMENTS

NOTES:

Gross Weight: 27806.3 grams

Net Weight: 4733.2 grams

This calibration std. has been certified in accordance with the May 2012 EPA Traceability Protocol Document EPA-600/R-12/531. All testing processes and measurements conform to the requirements of ISO/IEC 17025 and to Airgas ISO 9001:2008 and relate only to items identified on this certificate. This document shall not be reproduced in full without written approval of the issuer.



TESTING CERT No. 3082.05

D. H. H. H.
Approved for Release



High Volume TSP & PM-10 Calibration Data Sheet

Calibration Location : SECOT Co., Ltd. Calibration Date : Jan 13, 2022

Hi-Vol Pump No. : BH-021 Indicator No. : CM-01

Amb. Temp (°C) : 25 Press (mmHg) : 760

Calibration by : Mr. Punkawin K.

Plate	Indicate (X) (cm.)	True H ₂ O (in.)	Actual Flow (Y) (cfm)	XY	X ²	Remark
18	19.80	12.50	58.84	1,165.03	392.04	
13	16.00	10.00	52.94	847.04	256.00	
10	12.40	7.80	46.90	581.56	153.76	
7	8.00	5.10	38.17	305.36	64.00	
5	4.80	3.10	30.04	144.19	23.04	
Sum	61.00	38.50	226.89	3,043.18	888.84	

Calibrated by : *Punkawin K.* Approved by : *Wittaya K.*



High Volume TSP & PM-10 Calibration Data Sheet

Calibration Location : SECOT Co.,Ltd. Calibration Date : Jan 14, 2022
 Hi-Vol Pump No. : BH-008 Indicator No. : CM-01
 Amb. Temp (°C) : 25 Press (mmHg) : 760
 Calibration by : Mr.Punkawin K.

Plate	Indicate (X) (cm.)	True H ₂ O (in.)	Actual Flow (Y) (cfm)	XY	X ²	Remark
18	17.40	12.50	58.84	1,023.82	302.76	
13	14.40	10.10	53.20	766.08	207.36	
10	11.60	7.80	46.90	544.04	134.56	
7	7.60	5.10	38.17	290.09	57.76	
5	4.80	3.10	30.04	144.19	23.04	
Sum	55.80	38.60	227.15	2,768.22	725.48	

Calibrated by : Mr. Punkawin K. Approved by : Mr. Haya K.



High Volume TSP & PM-10 Calibration Data Sheet

Calibration Location : SECOT Co.,Ltd. Calibration Date : Feb 3, 2022
 Hi-Vol Pump No. : BH-017 Indicator No. : CM-01
 Amb. Temp (°C) : 25 Press (mmHg) : 760
 Calibration by : Mr.Punkawin K.

Plate	Indicate (X) (cm.)	True H ₂ O (in.)	Actual Flow (Y) (cfm)	XY	X ²	Remark
18	19.00	13.00	59.98	1,139.70	361.00	
13	15.20	10.30	53.71	816.30	231.00	
10	11.60	8.00	47.48	550.80	134.60	
7	7.60	5.20	38.53	292.80	57.80	
5	4.40	3.20	30.50	134.20	19.40	
Sum	57.80	39.70	230.20	2,933.80	803.80	

Calibrated by : Mr. Punkawin K. Approved by : Mr. Haya K.



High Volume TSP & PM-10 Calibration Data Sheet

Calibration Location : SECOT Co.,Ltd. Calibration Date : Jan 14, 2022
 Hi-Vol Pump No. : BH-001 Indicator No. : CM-01
 Amb. Temp (°C) : 25 Press (mmHg) : 760
 Calibration by : Mr.Punkawin K.

Plate	Indicate (X) (cm.)	True H ₂ O (in.)	Actual Flow (Y) (cfm)	XY	X ²	Remark
18	17.40	12.60	59.07	1,027.82	302.76	
13	14.40	10.10	53.20	766.08	207.36	
10	11.40	7.80	46.90	534.66	129.96	
7	7.20	5.00	37.81	272.23	51.84	
5	4.40	3.00	226.60	997.04	19.36	
Sum	54.80	38.50	423.58	3,597.83	711.28	

Calibrated by : Punkawin Approved by : Witaya K.



High Volume TSP & PM-10 Calibration Data Sheet

Calibration Location : SECOT Co.,Ltd. Calibration Date : Jan 13, 2022
 Hi-Vol Pump No. : BH-025 Indicator No. : CM-01
 Amb. Temp (°C) : 25 Press (mmHg) : 760
 Calibration by : Mr.Punkawin K.

Plate	Indicate (X) (cm.)	True H ₂ O (in.)	Actual Flow (Y) (cfm)	XY	X ²	Remark
18	18.40	12.30	58.38	1,074.19	338.56	
13	14.00	9.00	50.29	704.06	196.00	
10	11.00	7.20	45.11	496.21	121.00	
7	7.60	4.90	37.44	284.54	57.76	
5	4.40	3.00	29.58	130.15	19.36	
Sum	55.40	36.40	220.80	2,689.16	732.68	

Calibrated by : Punkawin Approved by : Witaya K.



High Volume TSP & PM-10 Calibration Data Sheet

Calibration Location : SECOT Co.,Ltd. Calibration Date : Jan 13, 2022
 Hi-Vol Pump No. : BH-010 Indicator No. : CM-01
 Amb. Temp (°C) : 25 Press (mmHg) : 760
 Calibration by : Mr.Punkawin K.

Plate	Indicate (X) (cm.)	True H ₂ O (in.)	Actual Flow (Y) (cfm)	XY	X ²	Remark
18	18.40	13.20	60.43	1,111.91	338.56	
13	14.60	10.40	53.96	787.82	213.16	
10	11.40	7.90	47.19	537.97	129.96	
7	7.60	5.20	38.53	292.83	57.76	
5	4.60	3.20	30.50	140.30	21.16	
Sum	56.60	39.90	230.61	2,870.82	760.60	

Calibrated by : Punkawin Approved by : Wittaya K.



High Volume TSP & PM-10 Calibration Data Sheet

Calibration Location : SECOT Co.,Ltd. Calibration Date : Feb 3, 2022
 Hi-Vol Pump No. : BH-014 Indicator No. : CM-01
 Amb. Temp (°C) : 25 Press (mmHg) : 760
 Calibration by : Mr.Punkawin K.

Plate	Indicate (X) (cm.)	True H ₂ O (in.)	Actual Flow (Y) (cfm)	XY	X ²	Remark
18	17.60	12.60	59.07	1,039.70	309.80	
13	14.00	10.20	53.45	748.30	196.00	
10	11.20	7.80	46.90	525.30	125.40	
7	7.20	5.20	38.50	277.40	51.80	
5	4.00	3.10	30.04	120.20	16.00	
Sum	54.00	38.90	227.96	2,710.90	699.00	

Calibrated by : Punkawin Approved by : Wittaya K.



High Volume TSP & PM-10 Calibration Data Sheet

Calibration Location : SECOT Co.,Ltd. Calibration Date : Jan 13, 2022
 Hi-Vol Pump No. : BH-011 Indicator No. : CM-01
 Amb. Temp (°C) : 25 Press (mmHg) : 760
 Calibration by : Mr.Punkawin K.

Plate	Indicate (X) (cm.)	True H ₂ O (in.)	Actual Flow (Y) (cfm)	XY	X ²	Remark
18	18.00	12.80	59.53	1,071.54	324.00	
13	14.40	10.00	52.94	762.34	207.36	
10	11.60	7.80	46.90	544.04	134.56	
7	7.60	5.00	37.81	287.36	57.76	
5	4.40	3.10	30.04	132.18	19.36	
Sum	56.00	38.70	227.22	2,797.45	743.04	

Calibrated by : Punkawin K. Approved by : Wittaya W.



CONTROL UNIT CALIBRATION (Metric units, mm)

Date : 13 Jan 22

Barometric press, Pb

Initial	Final	Average
759	759	759

mmHg

Dry Gas Meter Data

Console No. : M50-07
 Metering System ID
 DGM Number : 90331
 DGM Model : MST-C2-1
 Calibrated by : Montri P.

Reference Dry Gas Meter Data

Serial No. : 358794
 Model : S110
 Correction factor (Yr) : 0.9966
 Last Calibration Date : 8 Jan 22

Orifice manometer setting, ΔH mm H2O	Ref. DGM Volume V _r Liters	DGM Volume V _m Liters	Temperature (°C)				Time ⊙ min	DGM Correction factor (Y)	ΔH@ mm
			Ref DGM T _r	Dry Gas Meter					
				Inlet T _i	Outlet T _o	Avg T _m			
12.5	100.1	102.0	23	23	22	22.5	9.33	0.9749	50.0995
25.0	100.2	100.1	23	23	22	22.5	6.80	0.9930	53.1342
50.0	100.0	99.4	23	23	22	22.5	4.85	0.9960	54.1998
76.0	100.1	99.2	23	23	22	22.5	3.93	0.9966	54.1201
100.0	100.3	98.4	23	23	22	22.5	3.93	1.0045	52.4992
150.0	100.2	100.5	23	23	22	22.5	2.78	0.9772	53.4119
Average								0.9904	52.9108

Approved by : Katesarin Vorradetwittaya
 (Miss Katesarin Vorradetwittaya)



CONTROL UNIT CALIBRATION

(Metric units, mm)

Date 14 Jan 22

Barometric press, Pb

Initial Final Average

758 758 758

mmHg

Dry Gas Meter Data

Console No.

M50-09

Metering System ID

DGM Number

333249

DGM Model

ES-110

Calibrated by : Montri P.

Reference Dry Gas Meter Data

Serial No.

358794

Model

S110

Correction factor (Yr)

0.9966

Last Calibration Date

8 Jan 22

Orifice manometer setting, ΔH mm H2O	Ref. DGM Volume V _r Liters	DGM Volume V _m Liters	Temperature (°C)				Time Θ min	DGM Correction factor (Y)	ΔH@ mm
			Ref DGM T _r	Dry Gas Meter					
				Inlet T _i	Outlet T _o	Avg T _m			
12.5	100.2	99.3	23	23	22	22.5	8.37	1.0022	40.2319
25.0	100.0	99.7	23	23	22	22.5	6.05	0.9955	42.2417
50.0	100.0	99.5	23	23	22	22.5	4.22	0.9953	41.0228
76.0	100.1	99.7	23	23	22	22.5	3.62	0.9918	45.7804
100.0	100.0	99.0	23	23	22	22.5	3.62	0.9953	46.8262
150.0	100.1	99.1	23	23	22	22.5	2.60	0.9900	46.7154

Average

0.9950

43.8031

Approved by :

(Miss Katesarin Vorradetwittaya)



PITOT TUBE CALIBRATION

Calibration Location: SECOT

Calibration Date : 14/01/2022

Calibrated duct No. : 1

Calibration Standard Pitot tube data

Pitot No. : Std-01

Coefficient (Cp) : 1

Type S Pitot No. : PS20-02

Calibrated by : Mr. Montri P.

A Side Calibration

Run No.	ΔPstd (mm H ₂ O)	ΔPs (mm H ₂ O)	Cp(s)	Deviation, δ Cp(s) - Cp(A)
1	7.55	10.55	0.8460	0.0085
2	7.55	11.00	0.8285	-0.0090
3	7.55	10.75	0.8380	0.0006

C_{p(A)} avg 0.8375

B Side Calibration

Run No.	ΔPstd (mm H ₂ O)	ΔPs (mm H ₂ O)	Cp(s)	Deviation, δ Cp(s) - Cp(B)
1	7.55	11.00	0.8285	-0.0097
2	7.55	10.50	0.8480	0.0098
3	7.55	10.75	0.8380	-0.0001

C_{p(B)} avg 0.8382

| Cp(A) - Cp(B) | = 0.0007

C_{p(Avg)} = 0.8378

Approved by :

(Miss Katesarin Vorradetwittaya)

*** δ must be ≤ 0.01 for the test to be acceptable ***
 *** | Cp(A) - Cp(B) | must also be < 0.01 (if average of Cp(A) and Cp(B) is or be used) ***



PITOT TUBE CALIBRATION

Calibration Location: SECOT

Calibration Date : 14/01/2022

Calibrated duct No.: 1

Calibration Standard Pitot tube data

Pitot No. : Std-01

Coefficient (Cp) : 1

Type S Pitot No. : PS10-02

Calibrated by : Mr. Montri P.

A Side Calibration

Run No.	ΔP_{std} (mm H ₂ O)	ΔP_s (mm H ₂ O)	Cp(s)	Deviation, δ Cp(s) - Cp(A)
1	7.55	10.75	0.8380	0.0095
2	7.55	11.00	0.8285	-0.0001
3	7.55	11.25	0.8192	-0.0094

C_{P(A),avg} = 0.8286

B Side Calibration

Run No.	ΔP_{std} (mm H ₂ O)	ΔP_s (mm H ₂ O)	Cp(s)	Deviation, δ Cp(s) - Cp(B)
1	7.55	10.75	0.8380	0.0000
2	7.55	10.75	0.8380	0.0000
3	7.55	10.75	0.8380	0.0000

C_{P(B),avg} = 0.8380

| Cp(A) - Cp(B) | = 0.0095

C_{P(Avg)} = 0.8333

Approved by :

(Miss Katesarin Vorradetwittaya)

*** δ must be ≤ 0.01 for the test to be acceptable ***
 *** | Cp(A) - Cp(B) | must also be < 0.01 if average of Cp(A) and Cp(B) is to be used ***



PITOT TUBE CALIBRATION

Calibration Location: SECOT

Calibration Date : 14/01/2022

Calibrated duct No.: 1

Calibration Standard Pitot tube data

Pitot No. : Std-01

Coefficient (Cp) : 1

Type S Pitot No. : PS20-01

Calibrated by : Mr. Montri P.

A Side Calibration

Run No.	ΔP_{std} (mm H ₂ O)	ΔP_s (mm H ₂ O)	Cp(s)	Deviation, δ Cp(s) - Cp(A)
1	7.55	10.50	0.8480	0.0066
2	7.55	10.75	0.8380	-0.0033
3	7.55	10.75	0.8380	-0.0033

C_{P(A),avg} = 0.8414

B Side Calibration

Run No.	ΔP_{std} (mm H ₂ O)	ΔP_s (mm H ₂ O)	Cp(s)	Deviation, δ Cp(s) - Cp(B)
1	7.55	10.75	0.8380	-0.0033
2	7.55	10.75	0.8380	-0.0033
3	7.55	10.50	0.8480	0.0066

C_{P(B),avg} = 0.8414

| Cp(A) - Cp(B) | = 0.0000

C_{P(Avg)} = 0.8414

Approved by :

(Miss Katesarin Vorradetwittaya)

*** δ must be ≤ 0.01 for the test to be acceptable ***
 *** | Cp(A) - Cp(B) | must also be < 0.01 if average of Cp(A) and Cp(B) is to be used ***

THE LINDE GROUP

Linde

Certificate Of Analysis
Special Gases Mixture

Customer Details

Name: SECOT CO., LTD. Address: House number 239 Rimklongprapa Rd, Bangsue, Bangkok 10800
Customer Tag No.:

Certificate Details

Number: 0303/19 Date of Issue: 4-Feb-2019 Expired date: 3-Feb-2023
Material Details: 90152418
Production Order: 6.52 M³ (nominal) Material Code: 478100-J-62 Cylinder No.: 85432
Gas content: 6.52 M³ (nominal) Filling pressure: 145 bar (g) Valve: CGA 590 BRASS
Cylinder Owner: LINDE Cylinder Material: STEEL Cylinder Size: 47 L

Laboratory Report

Component	Normal Concentration	Analysis Result ¹	Uncertainty ²	Method of Analysis ³
Oxygen	8.00%	8.07%	± 2% relative	(1) SG-O-01
Nitrogen	Balance			

Recommend usage condition

Minimum utilization: 5% of actual content or before expire date whichever comes first.
Storage condition: Keep in well ventilation and secure area.

Comments

Note:

1. All results expressed in this report are on mole/mole basis, unless otherwise specified.
2. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The measurement of this material is traceable to the SI through the reference gas standard which is traceable to Swiss National Standard of Mass or other recognised national metrology institutes.
3. (1) Gas Chromatography, (2) Paramagnetic Oxygen Analyzer, (3) Electrochemical Oxygen Analyzer, (4) Electrochemical Moisture Analyzer, (5) Total Hydrocarbon Analyzer, (6) Other - Specified

Sukanya Parinyasontorn
Signatory for and on behalf of Linde (Thailand) Co., Ltd.

Linde (Thailand) Public Company Limited

15th Floor, Bangna Tower A, 2/3 Moo 14, Bangna Trad Km. 4.5 Road, Bangsue, Bangkok, Samutprakan 10540, Tel (66) 2338-6100 Fax (66) 2338-6333
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PB-002/P004

Issued: 01 March 2021

THE LINDE GROUP

Linde

Certificate Of Analysis
Special Gases Mixture

Customer Details

Name: Secot Co., Ltd. Address: 239, Rimklongprapa Rd., Bangsue, Bangkok 10800
Customer Tag No.:

Certificate Details

Number: 2946/21 Date of Issue: 13-Jul-2021 Expiry date: 13-Jul-2023
Material Details: 90166595
Production Order: 640300-SK-44 Material Code: 640300-SK-44 Cylinder No.: A00753SK
Gas content: 5.52 M³ Filling pressure: 145.0 bar Valve: CGA 660 SS
Cylinder Owner: LINDE Cylinder Material: Spectra seal Cylinder Size: 40 L

Laboratory Report

Analytical Result

Component	Normal Concentration	Analysis Result ¹	Uncertainty ²	Method of Analysis ³	Assay Date
Nitric Oxide	40.0 ppm	39.4 ppm	± 1% relative	(6) I-PB-352	6-Jul & 13-Jul-21
Other NOx impurity in Nitrogen		Less than 1.9 ppm			

Reference Standard used in Assay

Reference Standard	Cylinder number	Concentration	Expiry date
Nitric Oxide in Nitrogen	266064SG	25.65 ± 0.26 ppm	6-Aug-2021

Analytical Instruments used in Assay

Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
FTIR Spectrometers Nicolet i550	FTIR-NO	24-Jun-2021

Recommend usage condition

Minimum utilization: 5% of actual content or before expire date whichever comes first.
Storage condition: Keep in well ventilation and secure area.

Comments

When reordering, please quote the material number

Note:

1. All results expressed in this report are on mole/mole basis, unless otherwise specified. The Assay of this Standard has been performed in accordance with the EPA Traceability Protocol (EPA-600/8-12/531) for the Assay and Certification of Gaseous Calibration Standards using procedure G1.
2. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The measurement of this material is traceable to the SI through the reference gas standard which is traceable to Swiss National Standard of Mass or other recognised national metrology institutes.
3. (1) Gas Chromatography, (2) Paramagnetic Oxygen Analyzer, (3) Electrochemical Oxygen Analyzer, (4) Electrochemical Moisture Analyzer, (5) Total Hydrocarbon Analyzer, (6) Other - Specified

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Linde (Thailand) Public Company Limited

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PB-002/P006

Issued: 01 July 2021

THE LINDE GROUP

Linde

Certificate Of Analysis
Special Gases Mixture

Customer Details		
Name:	Address:	Customer Tag No.:
Secot Co., Ltd.	239, Rimklongprapa Rd., Bangsue, Bangkok 10800	

Certificate Details					
Number:	0225/22	Date of Issue:	31-Jan-2022	Expiry date:	31-Jan-2024
Material Details					
Production Order:	90169721	Material Code:	614500-SK-44	Cylinder No.:	A00932SK
Gas content:	5.52 M ³	Filling pressure:	145.0 bar	Valve:	CGA 660 SS
Cylinder Owner:	LINDE	Cylinder Material:	Spectra seal	Cylinder Size:	40 L

Laboratory Report					
Component		Analytical Result			
Normal Concentration		Analysis Result ¹	Uncertainty ²	Method of Analysis ³	Assay Date
Nitric Oxide		83.3 ppm	± 1% relative	(6) I-PB-352	24-Jan & 31-Jan-22
Other NOx impurity in Nitrogen		Less than 4.1 ppm			

Reference Standard used in Assay			
Reference Standard	Cylinder number	Concentration	Expiry date:
Nitric Oxide in Nitrogen	122820SG	50.87 ± 0.25 ppm	6-May-2023

Analytical Instruments used in Assay		
Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
FTIR Spectrometers Nicolet iS50	FTIR-NO	10-Jan-2022

Recommend usage condition

Minimum utilization:	5% of actual content or before expiry date whichever comes first.
Storage condition:	Keep in well ventilation and secure area.

Comments

When reordering, please quote the material number

Note:

1. All results expressed in this report are on mole/mole basis, unless otherwise specified. The Assay of this Standard has been performed in accordance with the EPA Traceability Protocol EPA-600/R-12/531 for the Assay and Certification of Gaseous Calibration Standards using procedure G1.
2. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The measurement of this material is traceable to the SI through the reference gas standard which is traceable to Swiss National Standard of Mass or other recognised national metrology institutes.
3. (1) Gas Chromatography, (2) Paramagnetic Oxygen Analyzer, (3) Electrochemical Oxygen Analyzer, (4) Electrochemical Moisture Analyzer, (5) Total Hydrocarbon Analyzer, (6) Other - Specified

Page 1 of 1

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ฉบับที่ 0001 (ฉบับที่ 0001) ฉบับ (ฉบับที่ 0001)

วันที่ 15 มกราคม 2565 ถึง 2/3 หมู่ 14 ตำบลบางนา-ตราด น. 6,5 กรุงเทพมหานคร

เบอร์โทร: 02-238-6100 โทรสาร: (66) 2338-6100 อีเมล: (66) 2338-6333

โรงงานผลิต: 105 หมู่ 5 ตำบลบางนา-ตราด อำเภอบางนา จังหวัดสมุทรปราการ 24180

Sukanya Parinyasontorn
Signatory for and on behalf of Linde (Thailand) Co., Ltd.

Linde (Thailand) Public Company Limited

P.O. Registration No. 019357000795

15th floor, Bangna Tower A, 2/3 Moo 14, Bangna Trad Km. 6.5 Road, Bangkok

Bangplee, Samutprakarn 10540, Tel (66) 2338-6100 Fax (66) 2338-6333

Wellgrow Plant: 105 Moo 5, T.Bangsamak, A.Bangpakong, Chachoengsao 24180

PB-002/F006
Iss:K/2, 15 Oct 2021

THE LINDE GROUP

Linde

Certificate Of Analysis
Special Gases Mixture

Customer Details		
Name:	Address:	Customer Tag No.:
Secot Co., Ltd.	239, Rimklongprapa Rd., Bangsue, Bangkok 10800	

Certificate Details					
Number:	2947/21	Date of Issue:	13-Jul-2021	Expiry date:	13-Jul-2023
Material Details					
Production Order:	9016659S	Material Code:	640300-SK-44	Cylinder No.:	A00861SK
Gas content:	5.52 M ³	Filling pressure:	145.0 bar	Valve:	CGA 660 SS
Cylinder Owner:	LINDE	Cylinder Material:	Spectra seal	Cylinder Size:	40 L

Laboratory Report					
Component		Analytical Result			
Normal Concentration		Analysis Result ¹	Uncertainty ²	Method of Analysis ³	Assay Date
Nitric Oxide		39.5 ppm	± 1% relative	(6) I-PB-352	6-Jul & 13-Jul-21
Other NOx impurity in Nitrogen		Less than 1.9 ppm			

Reference Standard used in Assay			
Reference Standard	Cylinder number	Concentration	Expiry date:
Nitric Oxide in Nitrogen	266064SG	25.65 ± 0.26 ppm	6-Aug-2021

Analytical Instruments used in Assay		
Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
FTIR Spectrometers Nicolet iS50	FTIR-NO	24-Jun-2021

Recommend usage condition

Minimum utilization:	5% of actual content or before expiry date whichever comes first.
Storage condition:	Keep in well ventilation and secure area.

Comments

When reordering, please quote the material number

Note:

1. All results expressed in this report are on mole/mole basis, unless otherwise specified. The Assay of this Standard has been performed in accordance with the EPA Traceability Protocol EPA-600/R-12/531 for the Assay and Certification of Gaseous Calibration Standards using procedure G1.
2. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The measurement of this material is traceable to the SI through the reference gas standard which is traceable to Swiss National Standard of Mass or other recognised national metrology institutes.
3. (1) Gas Chromatography, (2) Paramagnetic Oxygen Analyzer, (3) Electrochemical Oxygen Analyzer, (4) Electrochemical Moisture Analyzer, (5) Total Hydrocarbon Analyzer, (6) Other - Specified

Page 1 of 1

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ฉบับที่ 0001 (ฉบับที่ 0001) ฉบับ (ฉบับที่ 0001)

วันที่ 15 มกราคม 2565 ถึง 2/3 หมู่ 14 ตำบลบางนา-ตราด น. 6,5 กรุงเทพมหานคร

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โรงงานผลิต: 105 หมู่ 5 ตำบลบางนา-ตราด อำเภอบางนา จังหวัดสมุทรปราการ 24180

เบอร์โทร: (66) 38-570-479-93

เบอร์โทร: (66) 38-570-323

Sukanya Parinyasontorn
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Linde (Thailand) Public Company Limited

P.O. Registration No. 019357000795

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Wellgrow Plant: 105 Moo 5, T.Bangsamak, A.Bangpakong, Chachoengsao 24180

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PB-002/F006
Iss:K/1, 01 July 2021

Linde

Wetland Plant: 105 Moob N, Bangsaman, A. Bangsaman, Chetbongsoan 2410

THE LINDE GROUP

Linde

Certificate Of Analysis
Special Gases Mixture

Customer Details

Name: Serol Co., Ltd. Address: 239, Rimklongprapa Rd., Bangsue, Bangkok 10800 Customer Tag No.

Certificate Details

Number: 2972/20 Date of Issue: 18-Jul-2020 Expiry date: 18-Jul-2024
Material Details
Production Order: 90158708 Material Code: 608400-SK-44 Cylinder No.: 95078
Gas content: 5.52 M³ Filling pressure: 145.0 bar Valve: CGA 660 SS
Cylinder Owner: LINDE Cylinder Material: Spectra seal Cylinder Size: 40 L

Laboratory Report

Analytical Result					
Component	Normal Concentration	Analysis Result ¹	Uncertainty ²	Method of Analysis ³	Assay Date
Sulphur Dioxide in Nitrogen	40.0 ppm	41.7 ppm	± 1% relative	(6) I-PB-352	11-Jul & 18-Jul-20

Reference Standard used in Assay

Reference Standard Sulphur Dioxide in Nitrogen
Cylinder number: P6626-PSG Concentration: 51.48 ± 0.17 ppm Expiry date: 17-Apr-2021

Analytical Instruments used in Assay

Instrument/Make/Model: FTIR Spectrometers Nicolet iS50
Analytical Principle: FTIR-SQ2
Last Multipoint Calibration: 16-Jun & 17-Jul-20

Recommend usage condition

Minimum utilization: 5% of actual content or before expiry date whichever comes first.

Storage condition: Keep in well ventilation and secure area.

Comments

When reordering, please quote the material number

Note:

1. All results expressed in this report are on mole/mole basis, unless otherwise specified. The assay of this standard has been performed in accordance with the EPA Traceability Protocol EPA-600/8-12/531 for the Assay and Certification of Gaseous Calibration Standards using procedure G1.
2. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a level of confidence of approximately 95%. The measurement of this material is traceable to the SI through the reference gas standard which is traceable to Swiss National Standard of Mass or other recognized national metrology institutes.
3. (1) Gas Chromatography, (2) Paramagnetic Oxygen Analyzer, (3) Electrochemical Oxygen Analyzer, (4) Electrochemical Moisture Analyzer, (5) Total Hydrocarbon Analyzer, (6) Other - Specified.

Page 1 of 1

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โทรสาร (66) 38-570-323

Sukanya Parinyasontorn

Signatory for and on behalf of Linde (Thailand) Co., Ltd.

Linde (Thailand) Public Company Limited

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Thailand, Tel (66) 38-570-479-93 Fax (66) 38-570-323

PB-002/006

01 October 2019

THE LINDE GROUP

Linde

Certificate Of Analysis
Special Gases Mixture

Customer Details

Name: Serol Co., Ltd. Address: 239, Rimklongprapa Rd., Bangsue, Bangkok 10800 Customer Tag No.

Certificate Details

Number: 2926/21 Date of Issue: 13-Jul-2021 Expiry date: 13-Jul-2029
Material Details
Production Order: 90166593 Material Code: 445100-SK-44 Cylinder No.: AG0925SK
Gas content: 5.52 M³ Filling pressure: 145.0 bar Valve: CGA 660 SS
Cylinder Owner: LINDE Cylinder Material: Spectra seal Cylinder Size: 40 L

Laboratory Report

Analytical Result					
Component	Normal Concentration	Analysis Result ¹	Uncertainty ²	Method of Analysis ³	Assay Date
Sulphur Dioxide in Nitrogen	80.0 ppm	81.4 ppm	± 1% relative	(6) I-PB-352	5-Jul & 12-Jul-21

Reference Standard used in Assay

Reference Standard Sulphur Dioxide in Nitrogen
Cylinder number: E33188SG Concentration: 50.50 ± 0.40 ppm Expiry date: 16-Oct-2021

Analytical Instruments used in Assay

Instrument/Make/Model: FTIR Spectrometers Nicolet iS50
Analytical Principle: FTIR-SQ2
Last Multipoint Calibration: 7-Jun & 10-Jul-21

Recommend usage condition

Minimum utilization: 5% of actual content or before expiry date whichever comes first.

Storage condition: Keep in well ventilation and secure area.

Comments

When reordering, please quote the material number

Note:

1. All results expressed in this report are on mole/mole basis, unless otherwise specified. The Assay of this Standard has been performed in accordance with the EPA Traceability Protocol EPA-600/8-12/531 for the Assay and Certification of Gaseous Calibration Standards using procedure G1.
2. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a level of confidence of approximately 95%. The measurement of this material is traceable to the SI through the reference gas standard which is traceable to Swiss National Standard of Mass or other recognized national metrology institutes.
3. (1) Gas Chromatography, (2) Paramagnetic Oxygen Analyzer, (3) Electrochemical Oxygen Analyzer, (4) Electrochemical Moisture Analyzer, (5) Total Hydrocarbon Analyzer, (6) Other - Specified.

Page 1 of 1

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บริษัท ลินด์ (ประเทศไทย) จำกัด (มหาชน)

15 Floor, Bangna Tower A, 2/3 Moo 14, Bangna Trad KM.6.5 Road, Bangnaew

Bangkok, Samutprakarn 10540, Tel (66) 2338-6100 Fax (66) 2338-6333

Wellgrow Plant, 105 Moo 5, 1 Bangsamak, A Bangsue, Chachoengsao 24180

Thailand, Tel (66) 38-570-479-93 Fax (66) 38-570-323

โทรสาร (66) 38-570-323

PB-002/006

01 July 2021

Sukanya Parinyasontorn

Signatory for and on behalf of Linde (Thailand) Co., Ltd.

Linde (Thailand) Public Company Limited

15 Floor, Bangna Tower A, 2/3 Moo 14, Bangna Trad KM.6.5 Road, Bangnaew

Bangkok, Samutprakarn 10540, Tel (66) 2338-6100 Fax (66) 2338-6333

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โทรสาร (66) 38-570-323

THE LINDE GROUP

Linde

Certificate Of Analysis
Special Gases Mixture

Customer Details

Name: Secot Co., Ltd. Address: 239 Rimklongprapa Rd., Bangsue, Bangkok 10800 Customer Tag No.:

Certificate Details

Number: 0710/19 Date of Issue: 12-Mar-2019 Expiry date: 12-Mar-2023
Material Details
Production Order: 90152849 Material Code: 608400-SK-44 Cylinder No.: D636003
Gas content: 5.520 M³ Filling pressure: 145.0 Bar Valve: CGA 660 SS
Cylinder Owner: LINDE Cylinder Material: Spectra seal Cylinder Size: 40 L

Laboratory Report

Analytical Result

Component	Nominal Concentration	Analysis Result ¹	Uncertainty ²	Method of Analysis ³	Assay Date
Sulphur Dioxide In Nitrogen	40.0 ppm	39.4 ppm	± 1% relative	(6) I-PB-352	28-11-Mar-19

Reference Standard used in Assay
Cylinder number: 25624156 Concentration: 52.86 ± 0.42 ppm Expiry date: 1-May-2020
Sulphur Dioxide In Nitrogen

Instrument/Make/Model: FTIR Spectrometer's Nicolet IS50
Analytical Principle: FTIR-SO2
Last Multipoint Calibration: 23-Feb-2019

Recommend usage condition

Minimum utilization: 5% of actual content or before expiry date whichever comes first.

Storage condition: Keep in well ventilation and secure area.

Comments

When reordering, please quote the material number

Note:

1. All results expressed in this report are on mole/mole basis, unless otherwise specified. The Assay of this Standard has been performed in accordance with the EPA Traceability Protocol EPA-600/R-12/531 for the Assay and Certification of Gaseous Calibration Standards using procedure G1.
2. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The measurement of this material is traceable to the SI through the reference gas standard which is traceable to Swiss National Standard of MMS or other recognised national metrology institutes.
3. (1) Gas Chromatography, (2) Paramagnetic Oxygen Analyzer, (3) Electrochemical Oxygen Analyzer, (4) Electrochemical Moisture Analyzer, (5) Total Hydrocarbon Analyzer, (6) Other - Specified

Sukanya Parinyasontorn

Signatory for and on behalf of Linde (Thailand) Co., Ltd.

Page 1 of 1

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PB-002/P006

Iss.H/2, 01 March 2018

บริษัท ลินด์ (ประเทศไทย) จำกัด (มหาชน)

เลขที่ใบอนุญาตประกอบกิจการ 10540

ชั้น 15 อาคารทาวเวอร์ A, 2/3 หมู่ 14 ถนนบางนา-ตราด กม. 6.5 แขวงบางนา

เขตคลองเตย กรุงเทพมหานคร 10540 โทรศัพท์ (66) 2338-6100 โทรสาร (66) 2338-6333

ใบอนุญาตประกอบกิจการ 105 หมู่ 5 แขวงบางนา เขตคลองเตย กรุงเทพมหานคร 24180

โทรศัพท์ (66) 38 570-479-93

โทรสาร (66) 38 570-323

Linde (Thailand) Public Company Limited

PLC Registration No. 010751000000

15th Floor, Bangna Tower A, 2/3 Moo 14, Bangna Trd Rd, 6.5 Road, Bangkok

Bangplee, Samutprakarn 10540, Tel (66) 2338-6100 Fax (66) 2338-6333

Wellgrow Plant: 105 Moo 5, T.Bangsamak, A.Bangpakong, Chachoengsao 24180

Thailand, Tel (66) 38 570-479-93

Fax (66) 38 570-323

THE LINDE GROUP

Linde

Certificate Of Analysis
Special Gases Mixture

Customer Details

Name: Secot Co., Ltd. Address: 239 Rimklongprapa Rd., Bangsue, Bangkok 10800 Customer Tag No.:

Certificate Details

Number: 2186/20 Date of Issue: 23-May-2020 Expiry date: 22-May-2028
Material Details
Production Order: 90160268 Material Code: 445100-SV-44 Cylinder No: D878383
Gas content: 1.38 M³ Filling pressure: 145.0 bar Valve: CGA 660 SS
Cylinder Owner: LINDE Cylinder Material: Spectra seal Cylinder Size: 10 L

Laboratory Report

Analytical Result

Component	Nominal Concentration	Analysis Result ¹	Uncertainty ²	Method of Analysis ³	Assay Date
Sulphur Dioxide In Nitrogen	80.0 ppm	79.6 ppm	± 1% relative	(6) I-PB-352	16-May & 23-May-20

Reference Standard used in Assay
Cylinder number: 13318856 Concentration: 50.50 ± 0.40 ppm Expiry date: 16-Oct-2021
Sulphur Dioxide In Nitrogen

Instrument/Make/Model: FTIR Spectrometer's Nicolet IS50
Analytical Principle: FTIR-SO2
Last Multipoint Calibration: 15-May-2020

Recommend usage condition

Minimum utilization: 5% of actual content or before expiry date whichever comes first.

Storage condition: Keep in well ventilation and secure area.

Comments

When reordering, please quote the material number

Note:

1. All results expressed in this report are on mole/mole basis, unless otherwise specified. The Assay of this Standard has been performed in accordance with the EPA Traceability Protocol EPA-600/R-12/531 for the Assay and Certification of Gaseous Calibration Standards using procedure G1.
2. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The measurement of this material is traceable to the SI through the reference gas standard which is traceable to Swiss National Standard of MMS or other recognised national metrology institutes.
3. (1) Gas Chromatography, (2) Paramagnetic Oxygen Analyzer, (3) Electrochemical Oxygen Analyzer, (4) Electrochemical Moisture Analyzer, (5) Total Hydrocarbon Analyzer, (6) Other - Specified

Sukanya Parinyasontorn

Signatory for and on behalf of Linde (Thailand) Co., Ltd.

Page 1 of 1

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PB-002/P006

บริษัท ลินด์ (ประเทศไทย) จำกัด (มหาชน)

เลขที่ใบอนุญาตประกอบกิจการ 10540

ชั้น 15 อาคารทาวเวอร์ A, 2/3 หมู่ 14 ถนนบางนา-ตราด กม. 6.5 แขวงบางนา

เขตคลองเตย กรุงเทพมหานคร 10540 โทรศัพท์ (66) 2338-6100 โทรสาร (66) 2338-6333

ใบอนุญาตประกอบกิจการ 105 หมู่ 5 แขวงบางนา เขตคลองเตย กรุงเทพมหานคร 24180

Linde (Thailand) Public Company Limited

PLC Registration No. 010751000000

15th Floor, Bangna Tower A, 2/3 Moo 14, Bangna Trd Rd, 6.5 Road, Bangkok

Bangplee, Samutprakarn 10540, Tel (66) 2338-6100 Fax (66) 2338-6333

Wellgrow Plant: 105 Moo 5, T.Bangsamak, A.Bangpakong, Chachoengsao 24180

Sheet No. : NC-74-2022-013



SOUND LEVEL METER CALIBRATION

Calibration Location: SECOT

Calibration Date: Feb 11, 22

SOUND LEVEL CALIBRATOR

Brand	Model	Serial No.	Calibrated (dB)	Frequency (Hz)
RION	NC-74	34283648	94.00	1000

No.	Brand	Model	Serial No.	Microphone Serial No.	SLM Reading (dB)	dB Adjust
40	RION	NL-21	00187495	117799	93.6	0.4
94	RION	NL-21	00198276	123479	93.9	0.1

Calibrated by :

Approved by :

Sheet No. : CR-515-2022-005



SOUND LEVEL METER CALIBRATION

Calibration Location: SECOT

Calibration Date: Feb 11, 22

SOUND LEVEL CALIBRATOR

Brand	Model	Serial No.	Calibrated (dB)	Frequency (Hz)
Cirrus	CR:515	94296	93.8	1000

No.	Brand	Model	Serial No.	Effective Calibration Level (dB)	SLM Reading (dB)	Offset (dB)
16	Cirrus	CR162B	G300833	93.7	93.7	0.1

Calibrated by :

Approved by :



SOUND LEVEL METER CALIBRATION

Calibration Location: SECOT

Calibration Date: Jun 17, 22

SOUND LEVEL CALIBRATOR

Brand	Model	Serial No.	Calibrated (dB)	Frequency (Hz)
RION	NC-74	34283648	94.00	1000

No.	Brand	Model	Serial No.	Microphone Serial No.	SLM Reading (dB)	dB Adjust
42	RION	NL-21	00187497	117801	94.2	-0.2
50	RION	NL-21	00187505	117809	94.1	-0.1
77	RION	NL-21	00487734	119006	94.0	0.0

Calibrated by :

Approved by :



SOUND LEVEL METER CALIBRATION

Calibration Location: SECOT

Calibration Date: Mar 11, 22

SOUND LEVEL CALIBRATOR

Brand	Model	Serial No.	Calibrated (dB)	Frequency (Hz)
RION	NC-74	34283648	94.00	1000

No.	Brand	Model	Serial No.	Microphone Serial No.	SLM Reading (dB)	dB Adjust
60	RION	NL-21	00187515	117820	94.1	-0.1
62	RION	NL-21	00487719	118988	93.9	0.1

Calibrated by :

Approved by :



SOUND LEVEL METER CALIBRATION

Calibration Location: SECOT

Calibration Date: Jun 17, 22

SOUND LEVEL CALIBRATOR

Brand	Model	Serial No.	Calibrated (dB)	Frequency (Hz)
RION	NC-74	34283648	94.00	1000

No.	Brand	Model	Serial No.	Microphone Serial No.	SLM Reading (dB)	dB Adjust
62	RION	NL-21	00487719	118988	94.0	0.0
66	RION	NL-21	00487723	118993	94.0	0.0

Factory Calibration Certificate

 BEIJING J.T. TECHNOLOGY CO., LTD.
 www.jttech.com
 www.jntech.com

Factory Calibration Certificate



Instrument information

Name	WET BULB GLOBE TEMPERATURE (WBGT) METER
Series No	3522210172
Type	JT2011-E2A

Integrity check of instrument

Appearance	✓
Parts integrity	✓
Screen display or touch	✓
Instrument button	✓
Power supply	✓
battery	✓
Data storage and export	✓
Deviation degree of comparison test with standard instrument	✓

Calibration Results

UUC Sensor	Standard Temperature (°C)	UUC Reading (°C)	Correction (°C)	Uncertainty (±°C)
WET	25.0	25.1	-0.1	0.2
	30.0	30.1	-0.1	0.2
	35.0	35.2	-0.2	0.2
	40.0	39.9	0.1	0.2
	45.0	45.1	-0.1	0.2
DRY	25.0	25.2	-0.2	0.2
	30.0	29.9	0.1	0.2
	35.0	35.1	-0.1	0.2
	40.0	39.8	0.2	0.2
	45.0	44.9	0.1	0.2
GLOBE	25.0	24.8	0.2	0.2
	30.0	29.8	0.2	0.2
	35.0	35.1	-0.1	0.2
	40.0	39.9	0.1	0.2
	45.0	44.9	0.1	0.2

Environmental conditions: temperature: 26 °C±2°C, relative humidity: 30% RH±10RH%

Reference Standard : Standard Mercury Thermometers, Manufacturer: BGRI, Model: STA, SN: 2-56, Calibrated Date: 30 March 2021, Calibration Certificate No.: RA21H-AB1000009

This Certificate is traceable to NCMT North China, Certificate No.: RA20J-AK000073

Calibrated by :

Approved by :

Calibration Engineer:



Date:

Factory Calibration Certificate



Instrument information

Name **WET BULB GLOBE TEMPERATURE (WBGT) METER**
 Series No **3522210180**
 Type **JT2011-E2A**

Integrity check of instrument

Appearance	✓
Parts integrity	✓
Screen display or touch	✓
Instrument button	✓
Power supply	✓
battery	✓
Data storage and export	✓
Deviation degree of comparison test with standard instrument	✓

Calibration Results

UUC Sensor	Standard Temperature (°C)	UUC Reading (°C)	Correction (°C)	Uncertainty (±°C)
WET	25.0	24.8	0.2	0.2
	30.0	29.8	0.2	0.2
	35.0	34.9	0.1	0.2
	40.0	39.8	0.2	0.2
	45.0	45.2	-0.2	0.2
DRY	25.0	24.9	0.1	0.2
	30.0	30.2	-0.2	0.2
	35.0	35.2	-0.2	0.2
	40.0	39.8	0.2	0.2
	45.0	44.8	0.2	0.2
GLOBE	25.0	24.9	0.1	0.2
	30.0	29.9	0.1	0.2
	35.0	34.8	0.2	0.2
	40.0	40.2	-0.2	0.2
	45.0	44.8	0.2	0.2

Environmental conditions: temperature: 26 °C±2°C, relative humidity: 30%RH±10RH%

Reference Standard : Standard Mercury Thermometers, Manufacturer: BGRI, Model: STA, SN: 2-56,
 Calibrated Date: 30 March 2021, Calibration Certificate No.: RA21H-AB1000009
 This Certificate is traceable to NCMT North China, Certificate No.: RA20J-AK000073

Calibration Engineer:

Date:



INTERNATIONAL TESTING SERVICE CO., LTD
 1213/388 Ladprao 94 Ladprao Rd. Wangtonglang Bangkok 10310
 Tel 0-2559-2095 Fax 0-2559-2096
 E-mail : sale@itest-lab.com web site : www.itest-lab.com



CALIBRATION CERTIFICATE

Issued date : 4 April 2022

Client Name : **SECOT CO., LTD (HEAD OFFICE)**

Address : 239 rimklongprapa Rd., Bangsue, Bangkok 10800

Request No : **C-2203 - 161**

Laboratory No.: **CAL- 161**

Date of Request : 28 March 2022.

Date of Calibration : 1 April 2022.

1. Unit Under Calibration (UUC) :

Nomenclature : Digital Light Meter

Serial No. : A.041100

Maker : Extech

Model : 407026

2. Place of Calibration : Photometry Standard Laboratory, INTERNATIONAL TESTING SERVICE CO., LTD.

3. Range of Calibration : 1 Range

4. Condition of Laboratory : Ambient temperature : (25 ± 2) °C and relative humidity (60 ± 20) %.

5. Reference Standard : Standard Tungsten Halogen Lamp , Serial No.: 504010, which was calibrated on

14 September 2021, can be traceable to International System of Unit (SI) through Electrical and Electronics Institute Foundation for Industrial development, Certificate No.: 0117LI21.

6. Support Equipment :

1. Photometric bench , 6.3 meter long.
2. DC. power supply, Serial No.: EJ 19A 009, Model : GPR-25H 300 , Maker : GW INSTEK.
3. Digital Multimeter , Model : 34401A , S/N : MY44011212 and MY44011215.
4. Foot Candle / Lux Meter , Model : 407026, S/N : Q 558437, Maker : EXTECH

7. Calibration Procedure :

The measurement was done in accordance with WI-CP-01. The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor k = 2, providing a level of confidence of approximately 95 %.

The Results shown in this certification report refer only to the equipment(s) calibrated unless otherwise stated
 This Calibration Certificate cannot be reproduced, except in full, without permission of company.



**INTERNATIONAL TESTING SERVICE CO., LTD**

1213/388 Ladprao 94 Ladprao Rd. Wangtonglang Bangkok 10310

Tel 0-2559-2095 Fax 0-2559-2096

E-mail : sale@itest-lab.com web site : www.itest-lab.comRequest No : **C-2203 - 161**

Serial No. : A.041100

Laboratory No.: **CAL - 161****Results :**

UUC Range	Standard (lx)	UUC Reading (lx)		Correction (lx)	Uncertainty of Measurement (\pm lx)
		Before adjust	After adjust		
2000	0	0	0	0	0.6
	100	102	105	- 5	2.1 % of Reading
	500	496	506	- 6	
	1000	978	1001	- 1	
	1500	1463	1500	0	
	2000	1952	1994	+ 6	

Note : Zero adjust before used.

Calibration result approved by

(Mr. Yuttana Tholueng)Approved on behalf of
International Testing Service Co., Ltd
(Mr. Pichit Vivat-Anant)
Managing Director

ภาคผนวก ข

วิธีการตรวจวัดและติดตามตรวจสอบผลกระทบสิ่งแวดล้อม

ตารางที่ ข-1 สรุปวิธีการตรวจวัดและติดตามตรวจสอบผลกระทบสิ่งแวดล้อมและมาตรฐานวิธีวิเคราะห์

โครงการโรงไฟฟ้าพลังความร้อนร่วม 640 เมกะวัตต์

บริษัท โกลว์ เอสพีที 3 จำกัด

พารามิเตอร์	วิธีตรวจวัดคุณภาพสิ่งแวดล้อม	วิธีและมาตรฐานวิเคราะห์
1. คุณภาพอากาศในบรรยากาศ		
- ฝุ่นละอองรวม	Gravimetric High-Volume Air Sampler	Pre-Post Weight Difference / 40 CFR 50 App.B
- ฝุ่นละอองขนาดเล็กไม่เกิน 10 ไมครอน	Gravimetric High-Volume Air Sample (Hi-Vol PM-10 Size Selective Inlet)	Pre-Post Weight Difference / 40 CFR 50 App.J
- ก๊าซซัลเฟอร์ไดออกไซด์	Instrumental Reference Method	UV Fluorescence
- ก๊าซไนโตรเจนไดออกไซด์	Instrumental Reference Method	Chemiluminescence
- ความเร็วและทิศทางลม	Cup Anemometer / Anodized Aluminium Vane	Wind Speed & Wind Direction Recorder ASTM:D5741-96
2. คุณภาพอากาศจากปล่องระบายอากาศเสีย		
- ฝุ่นละออง	Isokinetic Stack Sampling Technique	Pre-Post Weight Difference / U.S.EPA, Method 5
- ก๊าซออกไซด์ของไนโตรเจน	Instrumental Reference Method	Chemiluminescence / U.S.EPA, Method 7E
- ก๊าซซัลเฟอร์ไดออกไซด์	Instrumental Reference Method	UV Fluorescence / U.S.EPA, Method 6C
- สารประกอบอินทรีย์ระเหยง่าย	Canisters	Gas Chromatography / Mass Spectrometer / Modified U.S.EPA, TO-15
3. คุณภาพน้ำทิ้ง		
- อุณหภูมิ	Grab Sampling	Thermometer / 2550
- ความเป็นกรด-ด่าง	Grab Sampling	Electrometric Method / 4500-H ⁺ B
- สารที่ละลายได้ทั้งหมด	Grab Sampling	Evaporation (temperature 103-105 °C) / 2540 C
- ออกซิเจนละลาย	Grab Sampling	Membrane Electrode Method / 4500-O G
- ความเค็ม	Grab Sampling	Electrical Conductivity Method / 2520 B
- ความนำไฟฟ้า	Grab Sampling	Laboratory Method / 2510 B
- ความขุ่น	Grab Sampling	Nephelometric Method / 2130 B
- บีโอดี	Grab Sampling	Membrane Electrode Method at 20 °C, 5 days / 5210 B
- สารแขวนลอย	Grab Sampling	Dried at 103-105 °C / 2540 D
- อาร์เซนิก (As)	Grab Sampling	Hydride Generation Atomic absorption Spectrometry / 3114 C

ตารางที่ ข-1 (ต่อ)

พารามิเตอร์	วิธีตรวจวัดคุณภาพสิ่งแวดล้อม	วิธีและมาตรฐานวิเคราะห์
3. คุณภาพน้ำทิ้ง (ต่อ)		
- ซีลีเนียม (Se)	Grab Sampling	Hydride Generation Atomic absorption Spectrometry / 3114 C
- ตะกั่ว (Pb)	Grab Sampling	Flame AAS / FAAS / 3113 B, 3120 B
- เหล็ก (Fe)	Grab Sampling	Flame AAS / FAAS / 3120 B
-ปรอท (Hg)	Grab Sampling	Cold Vapour Atomic Absorption Spectrometry / 3112 B
- บีโครเลียมไฮโดรคาร์บอน	Grab Sampling	EPA 3510 C / 8015 D, 5030 C / 8260 C
4. คุณภาพน้ำทะเล		
- อุณหภูมิ	Integrate Sampling	Thermometer / 2550 B
- ความเป็นกรด-ด่าง	Integrate Sampling	Electrometric Method / 4500-H ⁺ B
- สารที่ละลายได้ทั้งหมด	Integrate Sampling	Evaporation (temperature 103-105 °C) / 2540 C
- ออกซิเจนละลาย	Integrate Sampling	Membrane Electrode Method / 4500-O G
- ความเค็ม	Integrate Sampling	Electrical Conductivity Method / 2520 B
- ความนำไฟฟ้า	Integrate Sampling	Laboratory Method / 2510 B
- ความขุ่น	Integrate Sampling	Nephelometric Method / 2130 B
- ความโปร่งใส	Integrate Sampling	Secchi Disc
- บีโอดี	Integrate Sampling	Membrane Electrode Method at 20 °C, 5 days / 5210 B
- สารแขวนลอย	Integrate Sampling	Glass Fiber Filter Disc / 2540 D
- คลอรีนคงเหลือ	Integrate Sampling	DPD Colorimetric Method / 4500-Cl G
- อาร์เซนิก (As)	Integrate Sampling	Hydride Generation Atomic absorption Spectrometry / 3114 C
- ซีลีเนียม (Se)	Integrate Sampling	Hydride Generation Atomic absorption Spectrometry / 3114 C
- ตะกั่ว (Pb)	Integrate Sampling	Graphite Furnace Atomic Absorption Spectrometry / 3113 B
- เหล็ก (Fe)	Integrate Sampling	Flame AAS / 3120 B
- ปรอท (Hg)	Integrate Sampling	Cold Vapour Atomic Absorption Spectrometry / 3112 B
- บีโครเลียมไฮโดรคาร์บอน	Integrate Sampling	Fluorescence / IOC / GGE(MSI)-III/3

ตารางที่ ข-1 (ต่อ)

พารามิเตอร์	วิธีตรวจวัดคุณภาพสิ่งแวดล้อม	วิธีและมาตรฐานวิเคราะห์
4. นิเวศวิทยาทางน้ำ		
- แหล่งกักต่อน้ำ	Horizontal Hauling	Counting Method
- แหล่งกักต่อน้ำ	Horizontal Hauling	Counting Method
- สัตว์หน้าดิน	Horizontal Hauling	Counting Method
- ไข่และตัวอ่อน	Horizontal Hauling	Counting Method
5. ระดับเสียง	Sound Pressure Level Meter	Leq(8), Leq(24), L ₉₀
6. ความร้อน	Area heat stress monitor	WBGT-Index
7. แสงสว่าง	Lux meter	Lux

ภาคผนวก ข

เอกสารชี้แจงเงื่อนไขของปฏิบัติการวิเคราะห์เอกชน
จากกรมโรงงานอุตสาหกรรม



ที่ อภ ๐๓๑๐(๑)/ ๓ ๑ ๘ ๐ ๕

กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ เขตราชเทวี
กรุงเทพมหานคร ๑๐๔๐๐

๒๑ ตุลาคม ๒๕๖๓

เรื่อง ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

เรียน กรรมการผู้จัดการ บริษัท ซีคอฟ จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน
ลงวันที่ ๒๔ มีนาคม ๒๕๖๓

สิ่งที่ส่งมาด้วย ๑. รายชื่อผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๓ แผ่น

๒. รายชื่อเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๓ แผ่น

๓. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๓๒ แผ่น

ตามหนังสือที่อ้างถึง บริษัท ซีคอฟ จำกัด ขอต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๒๓๙ สถานที่ตั้งเลขที่ ๒๓๙ ถนนวิมลคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร ต่อกรมโรงงานอุตสาหกรรม นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้บริษัท ซีคอฟ จำกัด ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน โดยมีองค์ประกอบดังนี้

ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๑๐ ราย ตามสิ่งที่ส่งมาด้วย ๑

ข. เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๓๑ ราย ตามสิ่งที่ส่งมาด้วย ๒

ค. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนให้วิเคราะห์ในน้ำเสีย จำนวน ๔๖ รายการ น้ำได้ดิน

จำนวน ๑๒๓ รายการ อากาศเสีย จำนวน ๒๗ รายการ สิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว จำนวน ๓๔ รายการ และดิน จำนวน ๑๒๒ รายการ รวมทั้งสิ้นจำนวน ๓๕๒ รายการ ตามสิ่งที่ส่งมาด้วย ๓

หนังสือฉบับนี้จะหมดอายุในวันที่ ๒ พฤษภาคม ๒๕๖๖ หากประสงค์จะต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ให้ยื่นคำขอต่ออายุพร้อมเอกสารประกอบคำขอต่อกรมโรงงานอุตสาหกรรมภายใน ๓๐ วัน ก่อนวันสิ้นอายุของหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ซึ่งคำขอต่ออายุดังกล่าวขอรับได้ที่กรมโรงงานอุตสาหกรรม

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

(นางจินตา เดชะรินทร์)
ผู้อำนวยการกองวิจัยและเฝ้าระวังมลพิษโรงงาน
ปฏิบัติราชการแทนอธิบดีกรมโรงงานอุตสาหกรรม

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท ซีคอฟ จำกัด

เลขทะเบียน ว-๒๓๙

ที่ อภ ๐๓๑๐(๑)/ ๓ ๑ ๘ ๐ ๕

ลงวันที่ ๒๑ ตุลาคม ๒๕๖๓

ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๑๐ ราย

๑) นางสมฤติ เกรียงไกรอุดม

ทะเบียนเลขที่ ว-๒๓๙-ค-๕๕๒๐

๒) นางอารยา ทิพย์รักษ์

ทะเบียนเลขที่ ว-๒๓๙-ค-๕๕๖๓

๓) นายขรรชัย เกรียงไกรอุดม

ทะเบียนเลขที่ ว-๒๓๙-ค-๕๕๗๕

๔) นางสาวเชมซุดา อินทร์ศร

ทะเบียนเลขที่ ว-๒๓๙-ค-๕๕๗๖

๕) นางสาวปรีดา สมใจ

ทะเบียนเลขที่ ว-๒๓๙-ค-๕๕๗๘

๖) นางสาวอริยญา มาตา

ทะเบียนเลขที่ ว-๒๓๙-ค-๕๕๗๙

๗) นางสาวดาวัลย์ วงศ์เจริญ

ทะเบียนเลขที่ ว-๒๓๙-ค-๕๕๘๐

๘) นางสาวณัฏฐา ฤกษ์วันดี

ทะเบียนเลขที่ ว-๒๓๙-ค-๕๕๘๒

๙) นางสาวนริสา ภูวสรระพีชญ์

ทะเบียนเลขที่ ว-๒๓๙-ค-๖๔๑๙

๑๐) นางสาวศิริวรรณ นิยมสง่า

ทะเบียนเลขที่ ว-๒๓๙-ค-๖๔๒๐

กองวิจัยและเฝ้าระวังมลพิษโรงงาน

กลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษและทะเบียนห้องปฏิบัติการ

โทร. ๐ ๒๒๐๒ ๔๐๐๒ ๐ ๒๒๐๒ ๔๑๔๖

โทรสาร ๐ ๒๓๕๔ ๓๒๐๘ ๐ ๒๓๕๔ ๓๔๑๕

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท ชีคอต จำกัด

เลขทะเบียน ว-๒๓๙

ที่ อก ๐๓๑๐(๑)/ ๑๑ ๘ ๐ ๔

ลงวันที่ ๒๑ ตุลาคม ๒๕๖๓

ข. เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๓๑ ราย

๑) นางสาวสุรัชดี ชัยธรรม	ทะเบียนเลขที่	ว-๒๓๙-จ-๕๘๒๕
๒) นางสาวสุธาทิพย์ เพียนดี	ทะเบียนเลขที่	ว-๒๓๙-จ-๕๘๒๕
๓) นางสาวสุนันทา ศิริวัฒนานนท์	ทะเบียนเลขที่	ว-๒๓๙-จ-๕๙๘๓
๔) นายบวร ดีชัยยะ	ทะเบียนเลขที่	ว-๒๓๙-จ-๕๙๘๖
๕) นางสาวเกศรินทร์ วรเดชาวิทยา	ทะเบียนเลขที่	ว-๒๓๙-จ-๕๙๙๑
๖) นายอนิวัฒน์ พิมวันนา	ทะเบียนเลขที่	ว-๒๓๙-จ-๖๐๐๑
๗) นายชิตพล สมประสงค์	ทะเบียนเลขที่	ว-๒๓๙-จ-๖๐๐๒
๘) นางสาวศศิธร พรหมประเสริฐ	ทะเบียนเลขที่	ว-๒๓๙-จ-๖๐๐๓
๙) นายศิวันนท์ กลวงษ์	ทะเบียนเลขที่	ว-๒๓๙-จ-๖๐๐๔
๑๐) นางสาวโชติมาศ ไทยเจริญ	ทะเบียนเลขที่	ว-๒๓๙-จ-๖๐๐๖
๑๑) นางสาวปิยขวัญ สุระโคตร	ทะเบียนเลขที่	ว-๒๓๙-จ-๖๑๒๑
๑๒) นางสาวณัฐศิริ เลิศธีรพิพัฒน์	ทะเบียนเลขที่	ว-๒๓๙-จ-๖๑๒๓
๑๓) นางสาวเกษรินทร์ ศิลศักดิ์	ทะเบียนเลขที่	ว-๒๓๙-จ-๖๑๒๔
๑๔) นางสาวอริษา คณิธรานนท์	ทะเบียนเลขที่	ว-๒๓๙-จ-๗๒๓๑
๑๕) นางสาวจิรนนท์ จิตุพัศศรี ปิยะธนากร	ทะเบียนเลขที่	ว-๒๓๙-จ-๗๒๓๒
๑๖) นางสาวสิริวรรณ แก้วชิงดวง	ทะเบียนเลขที่	ว-๒๓๙-จ-๗๒๓๓
๑๗) นางสาวปัทมวรรณ สุวรรณวิโรจน์	ทะเบียนเลขที่	ว-๒๓๙-จ-๗๒๓๔
๑๘) นางสาวกนิษฐา เจริญเชื้อ	ทะเบียนเลขที่	ว-๒๓๙-จ-๗๒๓๖
๑๙) นายจิรากร สิมศิลา	ทะเบียนเลขที่	ว-๒๓๙-จ-๗๒๓๗
๒๐) นายชนาธิป สิงห์เกษมศักดิ์	ทะเบียนเลขที่	ว-๒๓๙-จ-๗๒๓๘
๒๑) นายวัชรกานต์ ประมาคะเต	ทะเบียนเลขที่	ว-๒๓๙-จ-๗๒๔๐
๒๒) นายทอง เฮงขวัญกุล	ทะเบียนเลขที่	ว-๒๓๙-จ-๗๒๔๒
๒๓) นางสาวกฤษณา จันทุม	ทะเบียนเลขที่	ว-๒๓๙-จ-๗๘๐๒
๒๔) นางสาวพรนภา บุตรธรรม	ทะเบียนเลขที่	ว-๒๓๙-จ-๗๘๐๓
๒๕) นางสาวธารินี อาจปลิว	ทะเบียนเลขที่	ว-๒๓๙-จ-๗๘๐๔
๒๖) นายธนโชติ ช่างลือ	ทะเบียนเลขที่	ว-๒๓๙-จ-๗๘๐๖
๒๗) นางสาวพัชรา สมานฉันท์	ทะเบียนเลขที่	ว-๒๓๙-จ-๘๑๘๓
๒๘) นางสาวจุฬารัตน์ แจ่มเรือน	ทะเบียนเลขที่	ว-๒๓๙-จ-๘๔๔๓
๒๙) นางสาวณณิสสา กุ้ยอ่อน	ทะเบียนเลขที่	ว-๒๓๙-จ-๘๔๔๗
๓๐) นางสาววรัญญา เขียนมัน	ทะเบียนเลขที่	ว-๒๓๙-จ-๘๔๔๘
๓๑) นางสาวจิรารัตน์ นุริตมนต์	ทะเบียนเลขที่	ว-๒๓๙-จ-๘๔๔๙

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท ชีคอต จำกัด

เลขทะเบียน ว-๒๓๙

ที่ อก ๐๓๑๐(๑)/ ๑๑ ๘ ๐ ๔

ลงวันที่ ๒๑ ตุลาคม ๒๕๖๓

ขอขยายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๓๕๒ รายการ

น้ำเสีย จำนวน 46 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Aldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
2	Arsenic	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
3	Barium	1) Digestion, Direct Nitrous Oxide-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
4	α-BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
5	β-BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
6	γ-BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
7	δ-BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
8	Biochemical Oxygen Demand	1) 5-Day BOD Test, Azide Modification Method ^[4] 2) 5-Day BOD Test, Membrane Electrode Method ^[4]
9	Cadmium	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Method ^[4]



10 Chemical...

(นางริกาญจน์ ฉัตรสกุลโล)

ผู้อำนวยการกลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษ
และทะเบียนห้องปฏิบัติการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
10	Chemical Oxygen Demand	1) Open Reflux, Titrimetric method ^[4] 2) Close Reflux, Colorimetric method ^[4] 3) Closed Reflux, Titrimetric Method ^[4]
11	Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
12	Chromium	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Method ^[4]
13	Color	ADMI Weighted-Ordinate Spectrophotometric Method ^[4]
14	Copper	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Method ^[4]
15	Cyanide	Distillation, Colorimetric method ^[4]
16	2,4-D	Liquid-Liquid Extraction, Gas Chromatographic Method ^[4]
17	4,4'-DDD	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
18	4,4'-DDE	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
19	4,4'-DDT	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
20	Dieldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]



21 Endosulfan I...

(นางริกาญจน์ จิตรสกุลไธ)

ผู้อำนวยการศูนย์มาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษ
และทะเบียนข้อมูลปฏิบัติการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
21	Endosulfan I	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
22	Endosulfan II	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
23	Endosulfan Sulfate	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
24	Endrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
25	Endrin Aldehyde	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
26	Formaldehyde	Distillation, Colorimetric Method ^[3]
27	Free Chlorine	1) Iodometric Method ^[4] 2) DPD Colorimetric Method ^[4]
28	Heptachlor	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
29	Heptachlor epoxide	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
30	Hexavalent Chromium	1) Colorimetric Method ^[4] 2) Extraction, Air-Acetylene Flame Method ^[4]
31	Lead	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Method ^[4]



(นางริกาญจน์ จิตรสกุลไธ)

ผู้อำนวยการศูนย์มาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษ

32 Manganese...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
32	Manganese	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Method ^[4]
33	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[4]
34	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic Method ^[4]
35	Nickel	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Method ^[4]
36	Oil & Grease	1) Liquid-Liquid, Partition-Gravimetric Method ^[4] 2) Soxhlet Extraction Method ^[4]
37	pH	Electrometric Method ^[4]
38	Phenols	1) Distillation, Chloroform Extraction Method ^[4] 2) Distillation, Direct Photometric Method ^[4]
39	Selenium	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
40	Sulfide	1) Iodometric method ^[4] 2) Methylene blue method ^[4]
41	Temperature	Laboratory and Field Methods ^[4]
42	Total Dissolved Solids	Dried at 180 °C ^[4]
43	Total Kjeldahl Nitrogen	1) Macro Kjeldahl Method ^[4] 2) Semi-Micro Kjeldahl Method ^[4]
44	Total Suspended Solids	Dried at 103-105 °C ^[4]
45	Trivalent Chromium	1) Digestion, Direct Air-Acetylene Flame Method; Colorimetric Method; Calculation ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method; Colorimetric Method; Calculation ^[4] 3) Digestion, Inductively Coupled Plasma Method; Colorimetric Method; Calculation ^[4]
46	Zinc	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Method ^[4]

วิทย์

(นางวิภาณณ์ อัครสกุลวิไล)

ผู้อำนวยการกลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษ

น้ำไดคิน...

น้ำไดคิน จำนวน 123 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
2	Acetone	Purge and Trap Gas Chromatographic/ Mass Spectrometric Method ^[4]
3	Aldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
4	Anthracene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
5	Antimony	Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
6	Arsenic	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
7	Atrazine	Liquid-Liquid Extraction, Gas Chromatographic Method ^[4]
8	Barium	1) Digestion, Direct Nitrous Oxide-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
9	Benz(a)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
10	Benzene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
11	Benzo(b)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
12	Benzo(k)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
13	Benzoic acid	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
14	Benzo(a)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
15	Benzo(g,h,i)perylene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]

วิทย์

(นางวิภาณณ์ อัครสกุลวิไล)

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16 Beryllium...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
16	Beryllium	Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
17	Bis(2-chloroethyl)ether	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
18	Bis(2-ethylhexyl)phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
19	Bromodichloromethane	Purge and Trap Gas Chromatographic/Mass spectrometric Method ^[4]
20	Bromoform	Purge and Trap Gas Chromatographic/Mass spectrometric Method ^[4]
21	Butanol	Purge and Trap Gas Chromatographic/Mass spectrometric Method ^[4]
22	Butyl benzyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
23	Cadmium	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
24	Carbazole	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
25	Carbon disulfide	Purge and Trap Gas Chromatographic/Mass spectrometric Method ^[4]
26	Carbon tetrachloride	Purge and Trap Gas Chromatographic/Mass spectrometric Method ^[4]
27	Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
28	p-Chloroaniline	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
29	Chlorobenzene	Purge and Trap Gas Chromatographic/Mass spectrometric Method ^[4]
30	Chlorodibromomethane	Purge and Trap Gas Chromatographic/Mass spectrometric Method ^[4]
31	Chloroform	Purge and Trap Gas Chromatographic/Mass spectrometric Method ^[4]

(นางริกาญจน์ ฉัตรสกุลวิไล)

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32 2-Chlorophenol...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
32	2-Chlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
33	Chromium	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
34	Chromium (III)	1) Digestion, Direct Air-Acetylene Flame Method; Colorimetric Method; Calculation ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method; Colorimetric Method; Calculation ^[4] 3) Digestion, Inductively Coupled Plasma Spectrometric Method; Colorimetric Method; Calculation ^[4]
35	Chromium (VI)	1) Colorimetric Method ^[4] 2) Extraction, Air-Acetylene Flame Method ^[4]
36	Chrysene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
37	Cyanide	1) Distillation, Titrimetric Method ^[4] 2) Distillation, Colorimetric Method ^[4]
38	2,4-D	Liquid-Liquid Extraction, Gas Chromatographic Method ^[4]
39	DDD	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
40	DDE	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
41	DDT	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]

วิภา

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และทะเบียนห้องปฏิบัติการ

42 Dibenzo(a,h)...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
42	Dibenz(a,h)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
43	Di-n-butyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
44	1,2-Dichlorobenzene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ⁽⁴⁾
45	1,3-Dichlorobenzene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ⁽⁴⁾
46	1,4-Dichlorobenzene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ⁽⁴⁾
47	3,3'-Dichlorobenzidine	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
48	1,1-Dichloroethane	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ⁽⁴⁾
49	1,2-Dichloroethane	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ⁽⁴⁾
50	1,1-Dichloroethylene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ⁽⁴⁾
51	cis-1,2-Dichloroethylene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ⁽⁴⁾
52	trans-1,2-Dichloroethylene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ⁽⁴⁾
53	2,4-Dichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
54	1,2-Dichloropropane	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ⁽⁴⁾
55	1,3-Dichloropropane	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ⁽⁴⁾
56	1,3-Dichloropropene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ⁽⁴⁾
57	Dieldrin	1) Liquid-Liquid Extraction, Gas Chromatographic/ Method ⁽⁴⁾ 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
58	Diethyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾

59

2,4-Dimethylphenol...

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และพระเทพคุณูปการ (ภิกษุวิมล)

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
59	2,4-Dimethylphenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
60	2,4-Dinitrophenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
61	2,4-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
62	2,6-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
63	Di-n-Octyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
64	Endosulfan	1) Liquid-Liquid Extraction, Gas Chromatographic/ Method ⁽⁴⁾ 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
65	Endrin	1) Liquid-Liquid Extraction, Gas Chromatographic/ Method ⁽⁴⁾ 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
66	Ethylbenzene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ⁽⁴⁾
67	Fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
68	Fluorene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
69	Heptachlor	1) Liquid-Liquid Extraction, Gas Chromatographic/ Method ⁽⁴⁾ 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
70	Heptachlor epoxide	1) Liquid-Liquid Extraction, Gas Chromatographic/ Method ⁽⁴⁾ 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
71	Hexachlorobenzene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾
72	Hexachloro-1,3-butadiene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽⁴⁾

73

n-Hexane...

(นางริกาญจน์ ฉัตรสกุลวิไล)

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และพระเทพคุณูปการ (ภิกษุวิมล)

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
73	n-Hexane	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
74	α -HCH	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
75	β -HCH	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
76	γ -HCH	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
77	Hexachlorocyclopentadiene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
78	Hexachloroethane	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
79	Indeno(1,2,3-cd)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
80	Isophorone	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
81	Lead	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
82	Manganese	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
83	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[4]
84	Methanol	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]

วิมล

85 Methoxychlor...

(นางริกาญจน์ อัครสกุลวิไล)

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ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
85	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic Method ^[4]
86	Methyl bromide	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
87	Methylene chloride	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
88	2-Methylphenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
89	2-Methylnaphthalene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
90	Methyl tert-butyl ether	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
91	Naphthalene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
92	Nickel	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
93	Nitrobenzene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
94	N-Nitrosodiphenylamine	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
95	Polychlorinated Biphenyls - PCB-1016 - PCB-1221 - PCB-1232 - PCB-1242 - PCB-1248 - PCB-1254 - PCB-1260	Liquid-Liquid Extraction, Gas Chromatographic Method ^[4]
96	Pentachlorophenol	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]

วิมล

(นางริกาญจน์ อัครสกุลวิไล)

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และประเมินห้องปฏิบัติการ

97 pH...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
97	pH	Electrometric method ^[4]
98	Phenanthrene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
99	Phenol	1) Distillation, Chloroform Extraction Method ^[4] 2) Distillation, Direct Photometric Method ^[4] 3) Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
100	Pyrene	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
101	Selenium	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
102	Silver	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
103	Styrene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
104	1,1,2,2-Tetrachloroethane	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
105	Tetrachloroethylene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
106	Toluene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
107	TPH (C ₅ -C ₈)	Purge and Trap, Gas Chromatographic/ Mass spectrometric Method ^[7,9]
108	TPH (C ₈ -C ₁₆)	1) Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[6,8] 2) Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass spectrometric Method ^[6,9]
109	TPH (C ₁₆ -C ₃₅)	1) Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[6,8] 2) Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass spectrometric Method ^[6,9]
110	1,2,4-Trichlorobenzene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
111	1,1,1-Trichloroethane	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]

วิธีใหม่

112 1,1,2-Trichloroethane...

(นางริกาญจน์ ฉัตรสกุลวิไล)

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ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
112	1,1,2-Trichloroethane	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
113	Trichloroethylene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
114	2,4,5-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
115	2,4,6-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[4]
116	1,3,5-Trimethylbenzene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
117	Vanadium	Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]
118	Vinyl chloride	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
119	m-Xylene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
120	o-Xylene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
121	p-Xylene	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
122	Xylene (Total)	Purge and Trap Gas Chromatographic/ Mass spectrometric Method ^[4]
123	Zinc	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Electrothermal Atomic Absorption Spectrometric Method ^[4] 3) Digestion, Inductively Coupled Plasma Spectrometric Method ^[4]

อากาศเสีย (ปล่องระบาย) จำนวน 27 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Antimony	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]

วิธีใหม่

2 Arsenic...

(นางริกาญจน์ ฉัตรสกุลวิไล)

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และทะเบียนห้องปฏิบัติการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
2	Arsenic	1) Isokinetic Sampling, Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
3	Beryllium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
4	Cadmium	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
5	Carbon monoxide	Instrumental Analyzer Method ^[5]
6	Chlorine	1) Absorption Sampling, Ion Chromatographic Method ^[5] 2) Isokinetic Sampling, Ion Chromatographic Method ^[5]
7	Chromium	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
8	Cobalt	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
9	Copper	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
10	Cresol	Adsorption Sampling, Gas Chromatographic Method ^[5]
11	Dioxin/Furans	Isokinetic Sampling, Analysis by ISO/IEC 17025 Accredited Laboratory or Analysis by Department of Industrial Works Registered Laboratory (Dioxins/Furans Analysis Approved) ^[5]
12	Hydrogen chloride	1) Absorption Sampling, Ion Chromatographic Method ^[5] 2) Isokinetic Sampling, Ion Chromatographic Method ^[5]
13	Hydrogen Fluoride	1) Absorption Sampling, Ion Chromatographic Method ^[5] 2) Isokinetic Sampling, Ion Chromatographic Method ^[5]



(นางรวิภาญจน์ ฉัตรสกุลวิไล)

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14 Hydrogen Sulfide...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
14	Hydrogen Sulfide	Absorption Sampling, Iodometric Method ^[5]
15	Lead	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
16	Manganese	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
17	Mercury	Isokinetic Sampling, Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[5]
18	Nickel	1) Isokinetic Sampling, Digestion, Direct Air-Acetylene Flame Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
19	Opacity	Ringelmann's Method ^[2]
20	Oxide of Nitrogen	1) Absorption Sampling, Ion Chromatographic Method ^[5] 2) Absorption Sampling, Phenoldisulfonic acid Method ^[5] 3) Instrumental Analyzer Method ^[5]
21	Selenium	1) Isokinetic Sampling, Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[5] 2) Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
22	Sulfur dioxide	1) Isokinetic Sampling, Barium-Thorin Titrimetric Method ^[5] 2) Instrumental Analyzer Method ^[5]
23	Sulfuric acid	Isokinetic Sampling, Barium-Thorin Titrimetric Method ^[5]
24	Tin	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
25	Total Suspended Particulate	Isokinetic Sampling, Gravimetric Method ^[5]



(นางรวิภาญจน์ ฉัตรสกุลวิไล)

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26 Vanadium...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
26	Vanadium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
27	Xylene	1) Adsorption Sampling, Gas Chromatographic Method ^[5] 2) Adsorption Sampling, Gas Chromatographic/Mass Spectrometric Method ^[5]

สิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว จำนวน 34 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Aldrin	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[1,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
2	Antimony	1) Waste Extraction, Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14] 3) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[7,16] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
3	Arsenic	1) Waste Extraction, Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[1,6,16] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14] 3) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[7,16] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
4	Barium	1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method ^[1,6,15] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14]

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3) Digestion...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
5	Beryllium	3) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 4) Digestion, Inductively Coupled Plasma Method ^[7,14] 1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
6	Cadmium	1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method ^[1,6,15] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14] 3) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
7	Chlordane	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[1,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
8	Chromium	1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method ^[1,6,15] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14] 3) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
9	Chromium (III)	1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method; Waste Extraction, Colorimetric Method; Calculation Method ^[1,6,15,17] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method; Waste Extraction, Colorimetric Method; Calculation Method ^[1,6,16,17]

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3) Digestion...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
10	Chromium (VI)	3) Digestion, Flame Atomic Absorption Spectrometric Method; Alkaline Digestion, Colorimetric Method; Calculation Method ^[7,8,15,17] 4) Digestion, Inductively Coupled Plasma Method; Alkaline Digestion, Colorimetric Method; Calculation Method ^[7,8,14,17]
11	Cobalt	1) Waste Extraction, Colorimetric Method ^[1,17] 2) Alkaline Digestion, Colorimetric Method ^[8,17]
12	Copper	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
13	2,4-D	1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method ^[1,6,15] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14] 3) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
14	DDD	1) Waste Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,24] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[24]
15	DDE	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[1,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]



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กรมควบคุมมลพิษ กรุงเทพมหานคร

3) Soxhlet...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
16	DDT	3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26] 1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[1,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
17	Dieldrin	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[1,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
18	Endrin	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[1,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
19	Heptachlor	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[1,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet...



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4) Soxhlet...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
20	Lead	4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26] 1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method ^[1,6,15] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14] 3) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
21	Lindane	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[1,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
22	Mercury	1) Waste Extraction, Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[1,18] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14] 3) Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[19] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
23	Methoxychlor	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[1,9,22] 2) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,9,26] 3) Soxhlet Extraction, Gas Chromatographic Method ^[10,22] 4) Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
24	Molybdenum	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]

วิมล

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กองพิษภัยสิ่งแวดล้อม

25 Nickel...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
25	Nickel	1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method ^[1,6,15] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14] 3) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
26	Polychlorinated Biphenyls - Aroclor 1016 - Aroclor 1221 - Aroclor 1232 - Aroclor 1242 - Aroclor 1248 - Aroclor 1254 - Aroclor 1260	1) Waste Extraction, Separatory Funnel Liquid-Liquid Extraction, Gas Chromatographic Method ^[1,9,23] 2) Soxhlet Extraction, Gas Chromatographic Method ^[10,23]
27	Pentachlorophenol	1) Waste Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1,24] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[24]
28	pH	Electrometric Method ^[30,31]
29	Selenium	1) Waste Extraction, Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[1,6,20] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14] 3) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[7,20] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]
30	Silver	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
31	Thallium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
32	Trichloroethylene	1) Waste Extraction, Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1,12,25] 2) Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[12,25]

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33 Vanadium...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
33	Vanadium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14]
34	Zinc	2) Digestion, Inductively Coupled Plasma Method ^[7,14] 1) Waste Extraction, Digestion, Flame Atomic Absorption Spectrometric Method ^[1,6,15] 2) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[1,6,14] 3) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 4) Digestion, Inductively Coupled Plasma Method ^[7,14]

ดิน จำนวน 122 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
2	Acetone	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,25]
3	Aldrin	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]
4	Anthracene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
5	Antimony	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[7,16] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
6	Arsenic	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[7,16] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
7	Atrazine	Ultrasonic Extraction, Gas Chromatographic Method ^[11,22]
8	Barium	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]

9 Benz(a)anthracene...

วิมล

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ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
27	Chlordane	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]
28	p-Chloroaniline	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
29	Chlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,25]
30	Chlorodibromomethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,25]
31	Chloroform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,25]
32	2-Chlorophenol	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
33	Chromium	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
34	Chromium (III)	1) Digestion, Flame Atomic Absorption Spectrometric Method; Colorimetric Method; Calculation Method ^[7,8,15,17] 2) Digestion, Inductively Coupled Plasma Method; Colorimetric Method; Calculation Method ^[7,8,14,17]
35	Chromium (VI)	Alkaline Digestion, Colorimetric Method ^[8,17]
36	Chrysene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
37	Cyanide	1) Extraction, Distillation, Titrimetric Method ^[27,28,29] 2) Extraction, Distillation, Colorimetric Method ^[27,28,29]
38	2,4-D	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[24]
39	DDD	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]
40	DDE	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]

วิมล

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41 DDT...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
41	DDT	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
42	Dibenz(a,h)anthracene	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26]
43	Di-n-butyl phthalate	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26]
44	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[13,25]
45	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[13,25]
46	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[13,25]
47	3,3'-Dichlorobenzidine	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26]
48	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[13,25]
49	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[13,25]
50	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[13,25]
51	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[13,25]
52	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[13,25]
53	2,4-Dichlorophenol	Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
54	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[13,25]
55	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[13,25]
56	1,3-Dichloropropene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[13,25]



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57 Dieldrin...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
57	Dieldrin	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
58	Diethyl phthalate	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26]
59	2,4-Dimethylphenol	Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
60	2,4-Dinitrophenol	Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
61	2,4-Dinitrotoluene	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26]
62	2,6-Dinitrotoluene	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26]
63	Di-n-Octyl phthalate	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26]
64	Endosulfan	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
65	Endrin	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]
66	Ethylbenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^[13,25]
67	Fluoranthene	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26]
68	Fluorene	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[10,26]
69	Heptachlor	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method ^[11,26]

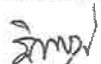


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70 Heptachlor epoxide...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
70	Heptachlor epoxide	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]
71	Hexachlorobenzene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
72	Hexachloro-1,3-butadiene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
73	n-Hexane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,25]
74	α -HCH	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]
75	β -HCH	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]
76	γ -HCH	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]
77	Hexachlorocyclopentadiene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
78	Hexachloroethane	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
79	Indeno(1,2,3-cd)pyrene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
80	Isophorone	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
81	Lead	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
82	Manganese	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]



(นางริกาญจน์ อัครสกุลวิไล)

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และทะเบียนห้องปฏิบัติการ

83 Mercury...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
83	Mercury	1) Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[19] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
84	Methanol	Ultrasonic Extraction, Direct Aqueous Injection, Gas Chromatographic Method ^[11,21]
85	Methoxychlor	1) Ultrasonic Extraction, Gas Chromatographic Method ^[11,22] 2) Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]
86	Methyl bromide	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,25]
87	Methylene chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,25]
88	2-Methylphenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]
89	2-Methylnaphthalene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[11,26]
90	Methyl tert-butyl ether	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[13,25]
91	Naphthalene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
92	Nickel	1) Digestion, Flame Atomic Absorption Spectrometric Method ^[7,15] 2) Digestion, Inductively Coupled Plasma Method ^[7,14]
93	Nitrobenzene	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
94	N-Nitrosodiphenylamine	Soxhlet Extraction, Gas Chromatographic/Mass Spectrometric Method ^[10,26]
95	Polychlorinated Biphenyls - Aroclor 1016 - Aroclor 1221 - Aroclor 1232 - Aroclor 1242 - Aroclor 1248 - Aroclor 1254 - Aroclor 1260	Soxhlet Extraction, Gas Chromatographic Method ^[10,23]



(นางริกาญจน์ อัครสกุลวิไล)

ผู้อำนวยการกลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษ

และทะเบียนห้องปฏิบัติการ

96 Pentachlorophenol...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
96	Pentachlorophenol	Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method ⁽¹²⁴⁾
97	Phenanthrene	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26)
98	Phenol	Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
99	Pyrene	Soxhlet Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(10,26)
100	Selenium	1) Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^(7,20) 2) Digestion, Inductively Coupled Plasma Method ^(7,14)
101	Silver	1) Digestion, Flame Atomic Absorption Spectrometric Method ^(7,15) 2) Digestion, Inductively Coupled Plasma Method ^(7,14)
102	Styrene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(13,25)
103	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(13,25)
104	Tetrachloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(13,25)
105	Toluene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(13,25)
106	TPH (C ₅ -C ₈)	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(13,25)
107	TPH (C ₈ -C ₁₆)	1) Soxhlet Extraction, Gas Chromatographic Method ^(10,21) 2) Soxhlet Extraction, Gas Chromatographic/ Mass spectrometric Method ^(10,25)
108	TPH (C ₁₆ -C ₃₅)	1) Soxhlet Extraction, Gas Chromatographic Method ^(10,21) 2) Soxhlet Extraction, Gas Chromatographic/ Mass spectrometric Method ^(10,25)
109	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(13,25)
110	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(13,25)

111 1,1,2-Trichloroethane...

(นางริกาญจน์ จัตรสกุลวิไล)

ผู้อำนวยการกลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษ
สำนักงานสิ่งแวดล้อมภาคที่ 11 เชียงใหม่

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
111	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(13,25)
112	Trichloroethylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(13,25)
113	2,4,5-Trichlorophenol	Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
114	2,4,6-Trichlorophenol	Ultrasonic Extraction, Gas Chromatographic/ Mass Spectrometric Method ^(11,26)
115	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(13,25)
116	Vanadium	Digestion, Inductively Coupled Plasma Method ^(7,14)
117	Vinyl chloride	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(13,25)
118	m-Xylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(13,25)
119	o-Xylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(13,25)
120	p-Xylene	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(13,25)
121	Xylene (Total)	Purge and Trap, Gas Chromatographic/ Mass Spectrometric Method ^(13,25)
122	Zinc	1) Digestion, Flame Atomic Absorption Spectrometric Method ^(7,15) 2) Digestion, Inductively Coupled Plasma Method ^(7,14)

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(นางริกาญจน์ จัตรสกุลวิไล)

ผู้อำนวยการกลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษ
สำนักงานสิ่งแวดล้อมภาคที่ 11 เชียงใหม่

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(นางริกาญจน์ ฉัตรสกุลวิไล)

ผู้อำนวยการกลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษ

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ริกาญ

(นางริกาญจน์ ฉัตรสกุลวิไล)

ผู้อำนวยการกลุ่มมาตรฐานวิธีการวิเคราะห์ทดสอบมลพิษ
และทะเบียนห้องปฏิบัติการ

ภาคผนวก ฅ

ใบรับรองความสามารถห้องปฏิบัติการและขอขยายการรับรอง
ห้องปฏิบัติการทดสอบ ตามมาตรฐาน ISO/IEC 17025 : 2017
จากสำนักงานมาตรฐานอุตสาหกรรม (สมอ.)



ใบรับรองเลขที่ 20T173/1151

ใบรับรองห้องปฏิบัติการ

อาศัยอำนาจตามความในพระราชบัญญัติการมาตรฐานแห่งชาติ พ.ศ. ๒๕๕๑

เลขาธิการสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม

ออกใบรับรองฉบับนี้ให้

บริษัท ซีคोट จำกัด

มีห้องปฏิบัติการตั้งอยู่เลขที่

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร

ได้รับการรับรองความสามารถห้องปฏิบัติการทดสอบ

ตามมาตรฐานเลขที่ มอก. 17025-2561 (ISO/IEC 17025 : 2017)

ข้อกำหนดทั่วไปว่าด้วยความสามารถห้องปฏิบัติการทดสอบและสอบเทียบ

หมายเลขการรับรองที่ ทดสอบ ๐๓๙๔

โดยมีสาขาการรับรองตามรายละเอียดแนบท้ายใบรับรอง

ตั้งแต่วันที่ ๙ กันยายน พ.ศ. ๒๕๖๓

ถึง วันที่ ๘ กันยายน พ.ศ. ๒๕๖๖

ออกให้ ณ วันที่ ๒๓ กันยายน ๒๕๖๓

(นายระกิดี รัตนกิจธนวิชัย)

รองเลขาธิการ ปฏิบัติราชการแทน

เลขาธิการสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม



รายละเอียดแนบท้ายใบรับรองห้องปฏิบัติการทดสอบ

ใบรับรองเลขที่ 20T173/1151

ชื่อห้องปฏิบัติการ

ห้องปฏิบัติการทดสอบ บริษัท ซีคोट จำกัด

ที่อยู่

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร

หมายเลขการรับรองที่

ทดสอบ 0394

สถานภาพห้องปฏิบัติการ

☒ ถาวร ☐ นอกสถานที่ ☐ชั่วคราว ☐เคลื่อนที่

สาขาการทดสอบ	รายการทดสอบ	วิธีทดสอบ
สาขาสิ่งแวดล้อม 1. น้ำและน้ำเสีย (water and wastewater)	- Arsenic 0.000 5 mg/l to 0.090 0 mg/l - Arsenic 0.05 mg/l to 4.50 mg/l - Barium 0.02 mg/l to 4.50 mg/l - Cadmium 0.01 mg/l to 4.50 mg/l - Chromium 0.01 mg/l to 4.50 mg/l - Copper 0.02 mg/l to 4.50 mg/l - Iron 0.05 mg/l to 9.00 mg/l - Lead 0.03 mg/l to 4.50 mg/l - Manganese 0.01 mg/l to 9.00 mg/l - Nickel 0.01 mg/l to 4.50 mg/l - Zinc 0.02 mg/l to 9.00 mg/l	- Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, Part 3030 F and Part 3114 C - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, Part 3030 E and Part 3120 B

รายละเอียดแนบท้ายใบรับรองห้องปฏิบัติการทดสอบ

ใบรับรองเลขที่ 20T173/1151

หมายเลขการรับรองที่ ทดสอบ 0394

สถานภาพห้องปฏิบัติการ ☒ ถาวร ☐ นอกสถานที่ ☐ชั่วคราว ☐เคลื่อนที่

สาขาการทดสอบ	รายการทดสอบ	วิธีทดสอบ
สาขาสังแวดล้อม		
1. น้ำและน้ำเสีย (ต่อ) (water and wastewater) (cont.)	- COD 100 mg/l to 4 000 mg/l	- Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, Part 5220 D
2. คุณภาพอากาศ (air quality)		
2.1 บริเวณทำงาน (workplace)	- Total dust 0.10 mg/filter to 2.00 mg/filter - Respirable dust 0.10 mg/filter to 2.00 mg/filter - Benzene 1.10 µg/tube to 420 µg/tube - Toluene 1.10 µg/tube to 420 µg/tube - Total xylenes 2.20 µg/tube to 840 µg/tube • m,p-xylene 1.10 µg/tube to 420 µg/tube • o-xylene 1.10 µg/tube to 420 µg/tube	- NIOSH Manual of Analytical Methods (NMAM), method 0500, 4 th edition, 15 th August 1994 (Exclude Sampling) - NIOSH Manual of Analytical Method(NMAM), method 0600, 4 th edition, 15 th January 1998 (Exclude Sampling) - NIOSH Manual of Analytical Methods (NMAM) , method 1501, 4 th edition, 15 th March 2003 (Exclude Sampling)

ฉบับที่ 1 ตั้งแต่ วันที่ 9 กันยายน 2563

หน้า 2/5

กระทรวงอุตสาหกรรม สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม

รายละเอียดแนบท้ายใบรับรองห้องปฏิบัติการทดสอบ

ใบรับรองเลขที่ 20T173/1151

หมายเลขการรับรองที่ ทดสอบ 0394

สถานภาพห้องปฏิบัติการ ☒ ถาวร ☐ นอกสถานที่ ☐ชั่วคราว ☐เคลื่อนที่

สาขาการทดสอบ	รายการทดสอบ	วิธีทดสอบ
สาขาสังแวดล้อม		
2. คุณภาพอากาศ (ต่อ) (air quality) (cont.)		
2.2 อากาศในปล่องระบาย อากาศ (stack)	- Sulfur dioxide 1.00 mg/l to 16 000 mg/l (solution) - Hydrogen fluoride 5 µg/sample to 400 µg/sample - Hydrogen chloride 5 µg/sample to 400 µg/sample	- US.EPA , Code of Federal Regulations, 40 CFR 60 appendix A, Method 6, July 2019 (Exclude Sampling) - In-house method : WI-7.2-1-22 based on US.EPA, Code of Federal Regulations, 40 CFR 60 appendix A Method 26, 2019 (Exclude Sampling)
2.3 บรรยากาศทั่วไป (ambient air)	- Volatile organic compounds (VOCs) • Chloroethene 0.05 µg/m ³ to 51.00 µg/m ³ • 1,3 - butadiene 0.04 µg/m ³ to 44.00 µg/m ³ • Bromomethane 0.08 µg/m ³ to 77.00 µg/m ³ • Acrolein 0.05 µg/m ³ to 45.00 µg/m ³ • Acrylonitrile 0.04 µg/m ³ to 43.00 µg/m ³ • Dichloromethane 0.14 µg/m ³ to 69.00 µg/m ³ • Carbon disulfide 0.06 µg/m ³ to 62.00 µg/m ³ • Trichloromethane 0.20 µg/m ³ to 97.00 µg/m ³	- In-house method :WI-7.2-1-24 based on US.EPA , Compendium Method TO - 15, EPA / 625 / R-96 / 010b, January 1999 (include sampling)

ฉบับที่ 1 ตั้งแต่ วันที่ 9 กันยายน 2563

หน้า 3/5

กระทรวงอุตสาหกรรม สำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม

รายละเอียดแนบท้ายใบรับรองห้องปฏิบัติการทดสอบ
ใบรับรองเลขที่ 20T173/1151

หมายเลขการรับรองที่ ทดสอบ 0394

สถานภาพห้องปฏิบัติการ ☒ ถาวร ☐ นอกสถานที่ ☐ชั่วคราว ☐เคลื่อนที่

สาขาการทดสอบ	รายการทดสอบ	วิธีทดสอบ
<p>สาขาส่งแวดล้อม</p> <p>2. คุณภาพอากาศ (ต่อ) (air quality) (cont.)</p> <p>2.3 บรรยากาศทั่วไป (ต่อ) (ambient air) (cont.)</p>	<p>- Volatile organic compounds (VOCs) (cont.)</p> <ul style="list-style-type: none"> 1,2 - dichloroethane 0.08 $\mu\text{g}/\text{m}^3$ to 80.00 $\mu\text{g}/\text{m}^3$ Benzene 0.06 $\mu\text{g}/\text{m}^3$ to 63.00 $\mu\text{g}/\text{m}^3$ Carbon tetrachloride 0.25 $\mu\text{g}/\text{m}^3$ to 125 $\mu\text{g}/\text{m}^3$ Trichloroethylene 0.21 $\mu\text{g}/\text{m}^3$ to 107 $\mu\text{g}/\text{m}^3$ 1,2 - dichloropropane 0.18 $\mu\text{g}/\text{m}^3$ to 92.00 $\mu\text{g}/\text{m}^3$ Tetrachloroethylene 0.27 $\mu\text{g}/\text{m}^3$ to 135 $\mu\text{g}/\text{m}^3$ 1,2 - dibromoethane 0.31 $\mu\text{g}/\text{m}^3$ to 153 $\mu\text{g}/\text{m}^3$ 1,1,2,2 - tetrachloroethane 0.69 $\mu\text{g}/\text{m}^3$ to 137 $\mu\text{g}/\text{m}^3$ 	<p>- In-house method :WI-7.2-1-24 US.EPA , Compendium Method TO - 15, EPA / 625 / R-96 / 010b, January 1999 (Include sampling)</p>

รายละเอียดแนบท้ายใบรับรองห้องปฏิบัติการทดสอบ
ใบรับรองเลขที่ 20T173/1151

หมายเลขการรับรองที่ ทดสอบ 0394

สถานภาพห้องปฏิบัติการ ☒ ถาวร ☐ นอกสถานที่ ☐ชั่วคราว ☐เคลื่อนที่

สาขาการทดสอบ	รายการทดสอบ	วิธีทดสอบ
<p>สาขาส่งแวดล้อม</p> <p>2. คุณภาพอากาศ (ต่อ) (air quality) (cont.)</p> <p>2.3 บรรยากาศทั่วไป (ต่อ) (ambient air) (cont.)</p>	<p>- Volatile organic compounds (VOCs) (cont.)</p> <ul style="list-style-type: none"> Benzyl chloride 0.52 $\mu\text{g}/\text{m}^3$ to 103 $\mu\text{g}/\text{m}^3$ 1,4 - dichlorobenzene 0.24 $\mu\text{g}/\text{m}^3$ to 120 $\mu\text{g}/\text{m}^3$ 	<p>- In-house method :WI-7.2-1-24 US.EPA , Compendium Method TO - 15, EPA / 625 / R-96 / 010b, January 1999 (Include sampling)</p>

ออกให้ ณ วันที่ 13 กันยายน 2563



(นายวีระศักดิ์ รัตนกิจธนวิทย์)
รองเลขาธิการ ปฏิบัติราชการแทน
เลขาธิการสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม