

ภาคผนวก ค

ผลการตรวจวัดคุณภาพสิ่งแวดล้อม

ภาคผนวก ค-1

ใบรายงานผลการติดตามตรวจสอบคุณภาพอากาศในบรรยากาศ



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2295407
Date Received : Aug 23, 2022
Date Reported : Aug 29, 2022
Report Number : 2394525-1C2

Page 1 of 1

Sample Description Air Quality
Location โรงพบบาลสงเสริมสุขภาพตามถนนตาพุด (GPS 47P 0735185, 1405871)
Date Analysis Commenced Aug 24, 2022
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one quartz filter paper (8x10 inch) placed in plastic bag

Sample Number	Sampled Date	Total Suspended Particulate (mg/m3)	Particulate Matter (PM-10) (mg/m3)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2295407-1	Aug 15 - Aug 16, 2022	0.044	0.015	755	30
2295407-2	Aug 16 - Aug 17, 2022	0.050	0.013	755	30
2295407-3	Aug 17 - Aug 18, 2022	0.036	0.009	755	32
2295407-4	Aug 18 - Aug 19, 2022	0.038	0.009	755	32
2295407-5	Aug 19 - Aug 20, 2022	0.040	0.011	755	32
2295407-6	Aug 20 - Aug 21, 2022	0.044	0.013	755	30
2295407-7	Aug 21 - Aug 22, 2022	0.053	0.016	755	30
Guideline		0.33	0.12	-	-

Reference Method

Total Suspended Particulate : US EPA 40 CFR Part 50 Appendix B
Particulate Matter (PM-10) : US EPA 40 CFR Part 50 Appendix J

Guideline : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004
Sampled By : Apichart Wilars

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111 / EMAIL



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2295490
Date Received : Aug 23, 2022
Date Reported : Aug 29, 2022
Report Number : 2394584-1C2

Page 1 of 1

Sample Description Air Quality
Location บ้านพบบาลสงเสริมสุขภาพ (GPS 47P 0729829, 1403305)
Date Analysis Commenced Aug 25, 2022
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one quartz filter paper (8x10 inch) placed in plastic bag

Sample Number	Sampled Date	Total Suspended Particulate (mg/m3)	Particulate Matter (PM-10) (mg/m3)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2295490-1	Aug 15 - Aug 16, 2022	0.041	0.018	755	30
2295490-2	Aug 16 - Aug 17, 2022	0.036	0.013	755	30
2295490-3	Aug 17 - Aug 18, 2022	0.029	0.011	755	32
2295490-4	Aug 18 - Aug 19, 2022	0.039	0.013	755	32
2295490-5	Aug 19 - Aug 20, 2022	0.036	0.014	755	32
2295490-6	Aug 20 - Aug 21, 2022	0.040	0.016	755	30
2295490-7	Aug 21 - Aug 22, 2022	0.044	0.016	755	30
Guideline		0.33	0.12	-	-

Reference Method

Total Suspended Particulate : US EPA 40 CFR Part 50 Appendix B
Particulate Matter (PM-10) : US EPA 40 CFR Part 50 Appendix J

Guideline : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004
Sampled By : Apichart Wilars

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111 / EMAIL



Analysis / Test Report



TESTING
No.0042

Lot ID: 2295491

Date Received : Aug 23, 2022

Date Reported : Aug 29, 2022

Report Number : 2394579-1C2

Client : GLOW ENERGY PUBLIC COMPANY LIMITED

11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Page 1 of 1

Sample Description Air Quality
Location วัดนาบึง (GPS 47P 0730822, 1407369)
Date Analysis Commenced Aug 24, 2022
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one quartz filter paper (8x10 inch) placed in plastic bag

Sample Number	Sampled Date	Total Suspended Particulate (mg/m ³)	Particulate Matter (PM-10) (mg/m ³)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2295491-1	Aug 15 - Aug 16, 2022	0.060	0.011	755	30
2295491-2	Aug 16 - Aug 17, 2022	0.103	0.013	755	30
2295491-3	Aug 17 - Aug 18, 2022	0.085	0.010	755	32
2295491-4	Aug 18 - Aug 19, 2022	0.076	0.013	755	32
2295491-5	Aug 19 - Aug 20, 2022	0.071	0.011	755	32
2295491-6	Aug 20 - Aug 21, 2022	0.072	0.013	755	30
2295491-7	Aug 21 - Aug 22, 2022	0.070	0.015	755	30
Guideline		0.33	0.12	-	-

Reference Method

Total Suspended Particulate : US EPA 40 CFR Part 50 Appendix B

Particulate Matter (PM-10) : US EPA 40 CFR Part 50 Appendix J

Guideline : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

Sampled By : Apichart Wilars

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111 / EMAIL



Analysis / Test Report



TESTING
No.0042

Lot ID: 22145954

Date Received : Dec 13, 2022

Date Reported : Dec 19, 2022

Report Number: 2509705-1

Client : GLOW ENERGY PUBLIC COMPANY LIMITED

11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Page 1 of 1

Sample Description Air Quality
Location วัดนาบึง (GPS 47P 0730822, 1407369)
Date Analysis Commenced Dec 14, 2022
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag and one quartz filter paper (8x10 inch) placed in plastic bag

Sample Number	Sampled Date	Total Suspended Particulate (mg/m ³)	Particulate Matter (PM-10) (mg/m ³)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
22145954-1	Dec 03 - Dec 04, 2022	0.060	0.023	757	31
22145954-2	Dec 04 - Dec 05, 2022	0.053	0.018	757	30
22145954-3	Dec 05 - Dec 06, 2022	0.060	0.022	757	30
22145954-4	Dec 06 - Dec 07, 2022	0.070	0.020	757	32
22145954-5	Dec 07 - Dec 08, 2022	0.066	0.021	757	32
22145954-6	Dec 08 - Dec 09, 2022	0.073	0.027	757	31
22145954-7	Dec 09 - Dec 10, 2022	0.074	0.026	757	31
Guideline		0.33	0.12	-	-

Reference Method

Total Suspended Particulate : US EPA 40 CFR Part 50 Appendix B

Particulate Matter (PM-10) : US EPA 40 CFR Part 50 Appendix J

Guideline : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

Sampled By : Norranon Tathongkham

Remark :

- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by

Thanita K.

Thanita Kulsuriwong
Scientist (4)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111 / EMAIL

S:\Reports_Air Ambient\7Days.rpt (11:17AM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2295403

Date Received : Aug 23, 2022
Date Reported : Aug 31, 2022
Report Number: 2394535-1 C2

Page 1 of 1

Sample Description	Air Quality						
Location	โรงพยาบาลส่งเสริมสุขภาพตำบลนาตาพุด (GPS 47P 073185, 1405871)						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Aug 15, 2022 - Aug 22, 2022						
Measurement by	Apichart Wilars						
Time	2295403-1 Aug 15, 2022	2295403-2 Aug 16, 2022	2295403-3 Aug 17, 2022	2295403-4 Aug 18, 2022	2295403-5 Aug 19, 2022	2295403-6 Aug 20, 2022	2295403-7 Aug 21, 2022
09:00 AM - 10:00 AM	0.008	0.011	0.008	0.009	0.007	0.010	0.010
10:00 AM - 11:00 AM	0.008	0.011	0.009	0.005	0.007	0.009	0.008
11:00 AM - 12:00 PM	0.008	0.011	0.016	0.013	0.012	0.009	0.008
12:00 PM - 01:00 PM	0.009	0.010	0.012	0.013	0.011	0.010	0.009
01:00 PM - 02:00 PM	0.012	0.008	0.011	0.010	0.009	0.009	0.008
02:00 PM - 03:00 PM	0.006	0.007	0.008	0.010	0.010	0.008	0.009
03:00 PM - 04:00 PM	0.004	0.010	0.009	0.011	0.012	0.008	0.008
04:00 PM - 05:00 PM	0.008	0.012	0.010	0.012	0.011	0.010	0.007
05:00 PM - 06:00 PM	0.011	0.013	0.012	0.011	0.010	0.010	0.008
06:00 PM - 07:00 PM	0.009	0.011	0.009	0.010	0.011	0.008	0.007
07:00 PM - 08:00 PM	0.014	0.009	0.012	0.010	0.010	0.012	0.008
08:00 PM - 09:00 PM	0.015	0.012	0.013	0.012	0.012	0.014	0.009
09:00 PM - 10:00 PM	0.015	0.014	0.016	0.014	0.015	0.016	0.011
10:00 PM - 11:00 PM	0.012	0.014	0.014	0.018	0.014	0.017	0.012
11:00 PM - 12:00 AM	0.012	0.015	0.017	0.012	0.013	0.018	0.012
12:00 AM - 01:00 AM	0.012	0.012	0.011	0.011	0.011	0.012	0.008
01:00 AM - 02:00 AM	0.009	0.010	0.014	0.008	0.013	0.010	0.012
02:00 AM - 03:00 AM	0.007	0.013	0.012	0.008	0.012	0.012	0.012
03:00 AM - 04:00 AM	0.006	0.013	0.011	0.008	0.006	0.011	0.008
04:00 AM - 05:00 AM	0.008	0.011	0.012	0.010	0.008	0.006	0.009
05:00 AM - 06:00 AM	0.008	0.010	0.011	0.009	0.010	0.007	0.008
06:00 AM - 07:00 AM	0.009	0.012	0.012	0.007	0.009	0.008	0.010
07:00 AM - 08:00 AM	0.009	0.015	0.010	0.004	0.005	0.010	0.008
08:00 AM - 09:00 AM	0.007	0.012	0.009	0.008	0.008	0.010	0.010
Average	0.009	0.012	0.012	0.010	0.010	0.011	0.009
1hr - Maximum	0.015	0.015	0.017	0.018	0.015	0.018	0.012
Standard 1hr - Average	0.170	0.170	0.170	0.170	0.170	0.170	0.170

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2295423

Date Received : Aug 23, 2022
Date Reported : Aug 31, 2022
Report Number: 2394538-1 C2

Page 1 of 1

Sample Description	Air Quality						
Location	บ้านหนองพูน (GPS 47P 0729829, 1403305)						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Aug 15, 2022 - Aug 22, 2022						
Measurement by	Apichart Wilars						
Time	2295423-1 Aug 15, 2022	2295423-2 Aug 16, 2022	2295423-3 Aug 17, 2022	2295423-4 Aug 18, 2022	2295423-5 Aug 19, 2022	2295423-6 Aug 20, 2022	2295423-7 Aug 21, 2022
10:00 AM - 11:00 AM	0.007	0.003	0.007	0.008	0.004	0.002	0.002
11:00 AM - 12:00 PM	0.004	0.002	0.002	0.008	0.004	0.002	0.004
12:00 PM - 01:00 PM	0.001	0.001	0.002	0.007	0.004	0.009	0.004
01:00 PM - 02:00 PM	0.003	0.002	0.003	0.007	0.004	0.003	0.004
02:00 PM - 03:00 PM	0.003	0.002	0.004	0.009	0.003	0.002	0.002
03:00 PM - 04:00 PM	0.003	0.002	0.005	0.006	0.003	0.002	0.002
04:00 PM - 05:00 PM	0.006	0.004	0.006	0.006	0.002	0.002	0.007
05:00 PM - 06:00 PM	0.008	0.002	0.002	0.003	0.004	0.002	0.004
06:00 PM - 07:00 PM	0.009	0.003	0.002	0.004	0.003	0.003	0.003
07:00 PM - 08:00 PM	0.004	0.003	0.003	0.006	0.003	0.003	0.002
08:00 PM - 09:00 PM	0.006	0.003	0.004	0.007	0.004	0.003	0.007
09:00 PM - 10:00 PM	0.003	0.002	0.002	0.004	0.002	0.003	0.001
10:00 PM - 11:00 PM	0.004	0.006	0.002	0.003	0.003	0.003	0.002
11:00 PM - 12:00 AM	0.004	0.005	0.008	0.006	0.004	0.002	0.003
12:00 AM - 01:00 AM	0.004	0.003	0.005	0.004	0.005	0.001	0.004
01:00 AM - 02:00 AM	0.005	0.004	0.004	0.004	0.004	0.002	0.004
02:00 AM - 03:00 AM	0.010	0.004	0.006	0.004	0.003	0.004	0.004
03:00 AM - 04:00 AM	0.010	0.004	0.004	0.006	0.002	0.004	0.004
04:00 AM - 05:00 AM	0.007	0.004	0.006	0.004	0.002	0.003	0.003
05:00 AM - 06:00 AM	0.004	0.007	0.004	0.005	0.003	0.004	0.003
06:00 AM - 07:00 AM	0.004	0.004	0.003	0.003	0.002	0.004	0.003
07:00 AM - 08:00 AM	0.007	0.008	0.006	0.003	0.002	0.004	0.003
08:00 AM - 09:00 AM	0.006	0.003	0.006	0.006	0.004	0.004	0.006
09:00 AM - 10:00 AM	0.009	0.006	0.005	0.006	0.003	0.002	0.003
Average	0.005	0.004	0.004	0.005	0.003	0.003	0.004
1hr - Maximum	0.010	0.008	0.008	0.009	0.005	0.009	0.007
Standard 1hr - Average	0.170	0.170	0.170	0.170	0.170	0.170	0.170

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Saranya C.
Saranya Chalerthamrong
Scientist (4)

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197

Life Sciences

www.alsglobal.com

5281-111/ EMAIL

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Saranya C.
Saranya Chalerthamrong
Scientist (4)

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197

Life Sciences

www.alsglobal.com

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID: 2295424

Date Received : Aug 23, 2022

Date Reported : Aug 31, 2022

Report Number: 2394536-1 C2

Page 1 of 1

Sample Description	Air Quality						
Location	วัดนาบึง (GPS 47P 0730822, 1407369)						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Aug 15, 2022 - Aug 22, 2022						
Measurement by	Apichart Wilars						
	2295424-1 Aug 15, 2022	2295424-2 Aug 16, 2022	2295424-3 Aug 17, 2022	2295424-4 Aug 18, 2022	2295424-5 Aug 19, 2022	2295424-6 Aug 20, 2022	2295424-7 Aug 21, 2022
Time							
11:00 AM - 12:00 PM	0.010	0.004	0.006	0.005	0.004	0.005	0.004
12:00 PM - 01:00 PM	0.011	0.004	0.006	0.006	0.004	0.006	0.004
01:00 PM - 02:00 PM	0.009	0.005	0.004	0.005	0.005	0.004	0.005
02:00 PM - 03:00 PM	0.005	0.005	0.004	0.005	0.008	0.004	0.004
03:00 PM - 04:00 PM	0.007	0.006	0.003	0.005	0.006	0.004	0.005
04:00 PM - 05:00 PM	0.009	0.006	0.006	0.009	0.007	0.006	0.005
05:00 PM - 06:00 PM	0.010	0.007	0.005	0.009	0.008	0.011	0.009
06:00 PM - 07:00 PM	0.007	0.005	0.004	0.010	0.006	0.012	0.005
07:00 PM - 08:00 PM	0.005	0.003	0.006	0.010	0.010	0.011	0.004
08:00 PM - 09:00 PM	0.003	0.003	0.010	0.010	0.011	0.011	0.004
09:00 PM - 10:00 PM	0.004	0.005	0.009	0.007	0.009	0.011	0.004
10:00 PM - 11:00 PM	0.006	0.003	0.004	0.006	0.008	0.010	0.005
11:00 PM - 12:00 AM	0.004	0.003	0.004	0.006	0.007	0.008	0.007
12:00 AM - 01:00 AM	0.004	0.003	0.003	0.004	0.006	0.008	0.003
01:00 AM - 02:00 AM	0.004	0.004	0.003	0.004	0.005	0.007	0.003
02:00 AM - 03:00 AM	0.005	0.004	0.004	0.003	0.005	0.008	0.003
03:00 AM - 04:00 AM	0.004	0.004	0.004	0.004	0.005	0.006	0.003
04:00 AM - 05:00 AM	0.005	0.004	0.004	0.006	0.006	0.005	0.004
05:00 AM - 06:00 AM	0.006	0.005	0.005	0.010	0.005	0.006	0.003
06:00 AM - 07:00 AM	0.007	0.005	0.006	0.009	0.006	0.007	0.003
07:00 AM - 08:00 AM	0.009	0.006	0.005	0.006	0.005	0.008	0.005
08:00 AM - 09:00 AM	0.005	0.006	0.005	0.005	0.005	0.006	0.006
09:00 AM - 10:00 AM	0.004	0.008	0.004	0.005	0.005	0.005	0.004
10:00 AM - 11:00 AM	0.005	0.007	0.004	0.003	0.005	0.004	0.004
Average	0.006	0.005	0.005	0.006	0.006	0.007	0.004
1hr - Maximum	0.011	0.008	0.010	0.010	0.011	0.012	0.009
Standard 1hr - Average	0.170	0.170	0.170	0.170	0.170	0.170	0.170
Standard	: Notification of the National Environment Board No. 33, 2009 (B.E. 2552).						
Reference Method	: US EPAMethod Part 50 App. F (Chemiluminescence)						

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Saranya C.

Saranya Chalerthamrong
Scientist (4)

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197

Life Sciences

www.alsglobal.com

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED.
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID: 22145951

Date Received : Dec 13, 2022

Date Reported : Dec 19, 2022

Report Number: 2509715-1

Page 1 of 1

Sample Description	Air Quality						
Location	วัดนาบึงคลองกรวด (ทพ. นาบึงกรวด)						
Parameter	Nitrogen dioxide (ppm)						
Measurement Date	Dec 03, 2022 - Dec 10, 2022						
Measurement by	Norranon Tathongkham						
	22145951-1 Dec 03, 2022	22145951-2 Dec 04, 2022	22145951-3 Dec 05, 2022	22145951-4 Dec 06, 2022	22145951-5 Dec 07, 2022	22145951-6 Dec 08, 2022	22145951-7 Dec 09, 2022
Time							
10:00 AM - 11:00 AM	0.001	0.007	<0.001	<0.001	<0.001	0.004	<0.001
11:00 AM - 12:00 PM	<0.001	0.003	<0.001	<0.001	<0.001	0.003	<0.001
12:00 PM - 01:00 PM	0.002	0.008	<0.001	<0.001	<0.001	0.002	0.002
01:00 PM - 02:00 PM	0.003	0.007	<0.001	<0.001	<0.001	<0.001	0.002
02:00 PM - 03:00 PM	0.002	0.006	<0.001	<0.001	<0.001	<0.001	0.004
03:00 PM - 04:00 PM	0.002	0.006	<0.001	<0.001	<0.001	<0.001	0.002
04:00 PM - 05:00 PM	0.001	0.004	<0.001	<0.001	<0.001	<0.001	0.002
05:00 PM - 06:00 PM	<0.001	0.007	<0.001	<0.001	<0.001	0.003	0.001
06:00 PM - 07:00 PM	<0.001	0.006	<0.001	<0.001	<0.001	0.003	<0.001
07:00 PM - 08:00 PM	<0.001	0.007	<0.001	<0.001	<0.001	0.003	<0.001
08:00 PM - 09:00 PM	0.001	0.008	<0.001	<0.001	<0.001	0.001	<0.001
09:00 PM - 10:00 PM	<0.001	0.010	<0.001	<0.001	<0.001	<0.001	0.001
10:00 PM - 11:00 PM	<0.001	0.010	<0.001	<0.001	0.005	0.001	0.002
11:00 PM - 12:00 AM	<0.001	0.007	<0.001	<0.001	0.004	0.001	<0.001
12:00 AM - 01:00 AM	<0.001	<0.001	<0.001	<0.001	0.004	0.001	<0.001
01:00 AM - 02:00 AM	<0.001	<0.001	<0.001	<0.001	0.005	0.002	<0.001
02:00 AM - 03:00 AM	<0.001	<0.001	<0.001	<0.001	0.003	0.004	0.002
03:00 AM - 04:00 AM	0.002	<0.001	<0.001	<0.001	0.003	0.004	0.002
04:00 AM - 05:00 AM	0.002	<0.001	<0.001	<0.001	0.002	<0.001	<0.001
05:00 AM - 06:00 AM	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	0.002
06:00 AM - 07:00 AM	0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001
07:00 AM - 08:00 AM	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
08:00 AM - 09:00 AM	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.001
09:00 AM - 10:00 AM	0.009	<0.001	<0.001	<0.001	0.004	<0.001	0.001
Average	0.002	0.004	<0.001	<0.001	0.002	0.002	0.001
1hr - Maximum	0.009	0.010	<0.001	<0.001	0.005	0.004	0.004
Standard 1hr - Average	0.170	0.170	0.170	0.170	0.170	0.170	0.170
Standard	: Notification of the National Environment Board No. 33, 2009 (B.E. 2552).						
Reference Method	: US EPAMethod Part 50 App. F (Chemiluminescence)						

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Saratat

Saratat Mongkonjirawut
Supervisor

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL

S:\Reports\Air SOxNOx.rpt (2:29PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID: 2295431

Date Received : Aug 23, 2022

Date Reported : Aug 31, 2022

Report Number: 2394572-1 C2

Page 1 of 1

Sample Description	Air Quality						
Location	บ้านพลองพัน (GPS 47P 0729829, 1403305)						
Parameter	Sulfur Dioxide (ppm)						
Measurement Date	Aug 15, 2022 - Aug 22, 2022						
Measurement by	Apichart Wilars						
	2295431-1	2295431-2	2295431-3	2295431-4	2295431-5	2295431-6	2295431-7
Time	Aug 15, 2022	Aug 16, 2022	Aug 17, 2022	Aug 18, 2022	Aug 19, 2022	Aug 20, 2022	Aug 21, 2022
10:00 AM - 11:00 AM	0.002	0.005	0.004	0.004	0.004	0.004	0.004
11:00 AM - 12:00 PM	0.002	0.004	0.004	0.004	0.004	0.004	0.004
12:00 PM - 01:00 PM	0.003	0.004	0.004	0.004	0.004	0.004	0.004
01:00 PM - 02:00 PM	0.004	0.004	0.004	0.004	0.004	0.004	0.006
02:00 PM - 03:00 PM	0.002	0.005	0.004	0.004	0.004	0.004	0.006
03:00 PM - 04:00 PM	0.002	0.004	0.004	0.004	0.004	0.004	0.004
04:00 PM - 05:00 PM	0.001	0.004	0.004	0.004	0.004	0.003	0.003
05:00 PM - 06:00 PM	0.001	0.004	0.004	0.004	0.004	0.004	0.004
06:00 PM - 07:00 PM	0.002	0.004	0.004	0.004	0.004	0.003	0.003
07:00 PM - 08:00 PM	0.005	0.005	0.004	0.004	0.004	0.004	0.004
08:00 PM - 09:00 PM	0.005	0.004	0.004	0.004	0.004	0.004	0.004
09:00 PM - 10:00 PM	0.005	0.004	0.004	0.004	0.004	0.004	0.004
10:00 PM - 11:00 PM	0.005	0.004	0.004	0.005	0.004	0.004	0.004
11:00 PM - 12:00 AM	0.005	0.004	0.004	0.005	0.004	0.004	0.004
12:00 AM - 01:00 AM	0.005	0.004	0.004	0.004	0.004	0.004	0.004
01:00 AM - 02:00 AM	0.005	0.004	0.004	0.004	0.004	0.004	0.004
02:00 AM - 03:00 AM	0.005	0.004	0.004	0.004	0.004	0.004	0.004
03:00 AM - 04:00 AM	0.005	0.004	0.004	0.004	0.004	0.004	0.004
04:00 AM - 05:00 AM	0.005	0.004	0.004	0.004	0.004	0.004	0.004
05:00 AM - 06:00 AM	0.005	0.004	0.004	0.004	0.004	0.004	0.004
06:00 AM - 07:00 AM	0.005	0.004	0.004	0.004	0.004	0.004	0.004
07:00 AM - 08:00 AM	0.005	0.004	0.004	0.004	0.004	0.004	0.004
08:00 AM - 09:00 AM	0.005	0.004	0.004	0.004	0.004	0.004	0.004
09:00 AM - 10:00 AM	0.005	0.004	0.004	0.004	0.004	0.004	0.004
Average	0.004	0.004	0.004	0.004	0.004	0.004	0.004
1hr - Maximum	0.005	0.005	0.004	0.006	0.004	0.004	0.006
Standard 1hr - Average	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Standard 24 hrs - Average	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Standard : Notification of the National Environment Board No.10, 1995 (B.E.2538), No. 21, 2001 (B.E.2544) and No.24, 2004 (B.E.2547).

Reference Method : US EPA Method Part 53 and 58



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID: 2295406

Date Received : Aug 23, 2022

Date Reported : Aug 31, 2022

Report Number: 2394530-1 C2

Page 1 of 1

Sample Description	Air Quality						
Location	โรงพยาบาลส่งเสริมสุขภาพตำบลอมบตาดุด (GPS 47P 073185, 1405871)						
Parameter	Sulfur Dioxide (ppm)						
Measurement Date	Aug 15, 2022 - Aug 22, 2022						
Measurement by	Apichart Wilars						
	2295406-1	2295406-2	2295406-3	2295406-4	2295406-5	2295406-6	2295406-7
Time	Aug 15, 2022	Aug 16, 2022	Aug 17, 2022	Aug 18, 2022	Aug 19, 2022	Aug 20, 2022	Aug 21, 2022
09:00 AM - 10:00 AM	0.001	0.002	0.002	0.002	0.002	0.002	0.002
10:00 AM - 11:00 AM	0.002	0.003	0.002	0.004	0.002	0.002	0.002
11:00 AM - 12:00 PM	0.002	0.002	0.002	0.004	0.003	0.002	0.002
12:00 PM - 01:00 PM	0.001	0.002	0.003	0.004	0.002	0.002	0.002
01:00 PM - 02:00 PM	0.001	0.002	0.003	0.004	0.001	0.002	0.002
02:00 PM - 03:00 PM	0.002	0.002	0.002	0.004	0.002	0.002	0.002
03:00 PM - 04:00 PM	0.002	0.002	0.003	0.004	0.002	0.002	0.002
04:00 PM - 05:00 PM	0.002	0.001	0.003	0.004	0.002	0.002	0.002
05:00 PM - 06:00 PM	0.002	0.003	0.003	0.005	0.002	0.002	0.002
06:00 PM - 07:00 PM	0.002	0.001	0.003	0.002	0.002	0.002	0.002
07:00 PM - 08:00 PM	0.002	0.003	0.003	0.002	0.002	0.003	0.002
08:00 PM - 09:00 PM	0.002	0.002	0.003	0.003	0.002	0.003	0.002
09:00 PM - 10:00 PM	0.001	0.002	0.003	0.002	0.002	0.002	0.002
10:00 PM - 11:00 PM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
11:00 PM - 12:00 AM	0.002	0.002	0.002	0.003	0.002	0.002	0.002
12:00 AM - 01:00 AM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
01:00 AM - 02:00 AM	0.002	0.001	0.002	0.003	0.002	0.002	0.002
02:00 AM - 03:00 AM	0.002	0.002	0.001	0.003	0.002	0.002	0.002
03:00 AM - 04:00 AM	0.002	0.002	0.003	0.003	0.002	0.002	0.002
04:00 AM - 05:00 AM	0.002	0.002	0.002	0.003	0.002	0.002	0.002
05:00 AM - 06:00 AM	0.002	0.002	0.002	0.003	0.002	0.002	0.002
06:00 AM - 07:00 AM	0.002	0.002	0.002	0.002	0.002	0.002	0.002
07:00 AM - 08:00 AM	0.001	0.002	0.002	0.002	0.002	0.003	0.002
08:00 AM - 09:00 AM	0.001	0.003	0.002	0.002	0.002	0.003	0.002
Average	0.002	0.002	0.002	0.003	0.002	0.002	0.002
1hr - Maximum	0.002	0.003	0.003	0.005	0.003	0.003	0.002
Standard 1hr - Average	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Standard 24 hrs - Average	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Standard : Notification of the National Environment Board No.10, 1995 (B.E.2538), No. 21, 2001 (B.E.2544) and No.24, 2004 (B.E.2547).

Reference Method : US EPA Method Part 53 and 58

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Saranya C.

Saranya Chalermtamrong
Scientist (4)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Saranya C.

Saranya Chalermtamrong
Scientist (4)

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand PHONE +66 0 2760 3000 FAX +66 0 2760 3197

Life Sciences

www.alsglobal.com

5281-111/EMAIL

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand PHONE +66 0 2760 3000 FAX +66 0 2760 3197

Life Sciences

www.alsglobal.com

5281-111/EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :
Project Location : Glow Phase5

Lot ID: 2295432

Date Received : Aug 23, 2022
Date Reported : Aug 31, 2022
Report Number: 2394542-1 C2

Page 1 of 1

Sample Description	Air Quality						
Location	วัดนาบุด (GPS 47P 0730822, 1407369)						
Parameter	Sulfur Dioxide (ppm)						
Measurement Date	Aug 15, 2022 - Aug 22, 2022						
Measurement by	Apichart Wilars						
	2295432-1	2295432-2	2295432-3	2295432-4	2295432-5	2295432-6	2295432-7
Time	Aug 15, 2022	Aug 16, 2022	Aug 17, 2022	Aug 18, 2022	Aug 19, 2022	Aug 20, 2022	Aug 21, 2022
11:00 AM - 12:00 PM	0.002	0.003	0.003	0.004	0.003	0.003	0.003
12:00 PM - 01:00 PM	0.003	0.003	0.004	0.003	0.003	0.003	0.003
01:00 PM - 02:00 PM	0.003	0.003	0.004	0.004	0.004	0.004	0.003
02:00 PM - 03:00 PM	0.003	0.003	0.004	0.003	0.003	0.004	0.003
03:00 PM - 04:00 PM	0.003	0.003	0.003	0.003	0.003	0.003	0.003
04:00 PM - 05:00 PM	0.003	0.003	0.003	0.003	0.005	0.004	0.003
05:00 PM - 06:00 PM	0.003	0.003	0.003	0.003	0.006	0.004	0.004
06:00 PM - 07:00 PM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
07:00 PM - 08:00 PM	0.003	0.004	0.003	0.003	0.003	0.004	0.003
08:00 PM - 09:00 PM	0.003	0.004	0.003	0.003	0.004	0.004	0.004
09:00 PM - 10:00 PM	0.003	0.004	0.003	0.003	0.004	0.004	0.003
10:00 PM - 11:00 PM	0.003	0.004	0.003	0.003	0.004	0.004	0.003
11:00 PM - 12:00 AM	0.003	0.003	0.004	0.003	0.003	0.003	0.004
12:00 AM - 01:00 AM	0.003	0.003	0.003	0.003	0.003	0.003	0.003
01:00 AM - 02:00 AM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
02:00 AM - 03:00 AM	0.003	0.003	0.003	0.003	0.003	0.004	0.003
03:00 AM - 04:00 AM	0.003	0.003	0.003	0.003	0.003	0.003	0.003
04:00 AM - 05:00 AM	0.003	0.003	0.003	0.003	0.003	0.003	0.003
05:00 AM - 06:00 AM	0.003	0.003	0.004	0.003	0.003	0.003	0.003
06:00 AM - 07:00 AM	0.003	0.003	0.004	0.003	0.003	0.003	0.003
07:00 AM - 08:00 AM	0.003	0.003	0.004	0.003	0.003	0.003	0.003
08:00 AM - 09:00 AM	0.003	0.003	0.004	0.003	0.003	0.003	0.003
09:00 AM - 10:00 AM	0.003	0.003	0.004	0.003	0.004	0.003	0.003
10:00 AM - 11:00 AM	0.003	0.003	0.004	0.003	0.004	0.003	0.003
Average	0.003	0.003	0.003	0.003	0.003	0.003	0.003
1hr - Maximum	0.003	0.004	0.004	0.004	0.006	0.004	0.004
Standard 1hr - Average	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Standard 24 hrs - Average	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Standard : Notification of the National Environment Board No.10, 1995 (B.E.2538), No. 21, 2001 (B.E.2544) and No.24, 2004 (B.E.2547).
Reference Method : US EPA Method Part 53 and 58



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :
Project Location : Glow Phase5

Lot ID: 22145952

Date Received : Dec 13, 2022
Date Reported : Dec 19, 2022
Report Number: 2509712-1

Page 1 of 1

Sample Description	Air Quality						
Location	วัดตากวนคลองคารวม (ทพ. นานตาพุด)						
Parameter	Sulfur Dioxide (ppm)						
Measurement Date	Dec 03, 2022 - Dec 10, 2022						
Measurement by	Norranon Tathongkham						
	22145952-1	22145952-2	22145952-3	22145952-4	22145952-5	22145952-6	22145952-7
Time	Dec 03, 2022	Dec 04, 2022	Dec 05, 2022	Dec 06, 2022	Dec 07, 2022	Dec 08, 2022	Dec 09, 2022
10:00 AM - 11:00 AM	0.001	0.001	0.001	0.002	0.001	0.001	0.001
11:00 AM - 12:00 PM	0.001	0.001	<0.001	0.001	<0.001	0.001	0.001
12:00 PM - 01:00 PM	0.001	0.001	<0.001	0.001	<0.001	0.001	0.001
01:00 PM - 02:00 PM	0.001	0.001	<0.001	0.001	0.001	0.001	0.001
02:00 PM - 03:00 PM	0.001	<0.001	0.001	0.001	<0.001	0.001	0.001
03:00 PM - 04:00 PM	<0.001	<0.001	0.001	0.001	<0.001	0.001	0.001
04:00 PM - 05:00 PM	<0.001	0.001	0.001	0.001	0.001	0.001	0.001
05:00 PM - 06:00 PM	<0.001	0.001	0.001	0.001	<0.001	0.001	0.001
06:00 PM - 07:00 PM	<0.001	0.001	0.001	0.001	<0.001	0.001	0.001
07:00 PM - 08:00 PM	0.001	0.001	0.001	0.001	0.001	0.001	0.001
08:00 PM - 09:00 PM	0.001	0.001	<0.001	0.001	<0.001	0.001	0.001
09:00 PM - 10:00 PM	0.001	0.001	0.001	<0.001	<0.001	0.001	0.001
10:00 PM - 11:00 PM	0.001	0.001	0.001	<0.001	<0.001	0.001	0.001
11:00 PM - 12:00 AM	0.001	0.001	0.001	0.001	0.001	0.001	0.001
12:00 AM - 01:00 AM	0.001	<0.001	0.001	0.001	0.001	0.001	0.001
01:00 AM - 02:00 AM	0.001	0.001	0.001	<0.001	0.001	0.001	0.001
02:00 AM - 03:00 AM	0.001	0.001	0.001	<0.001	<0.001	0.001	0.001
03:00 AM - 04:00 AM	0.001	0.001	0.001	<0.001	0.001	0.001	0.001
04:00 AM - 05:00 AM	0.001	0.001	0.001	0.001	0.001	0.001	0.001
05:00 AM - 06:00 AM	0.001	<0.001	0.001	0.001	0.001	0.001	0.001
06:00 AM - 07:00 AM	0.001	<0.001	0.001	0.001	0.001	0.001	0.001
07:00 AM - 08:00 AM	0.001	<0.001	0.001	0.001	0.001	0.001	0.001
08:00 AM - 09:00 AM	0.001	0.001	0.001	0.001	0.001	0.001	0.001
09:00 AM - 10:00 AM	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Average	0.001	0.001	0.001	0.001	0.001	0.001	0.001
1hr - Maximum	0.001	0.001	0.001	0.002	0.001	0.001	0.001
Standard 1hr - Average	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Standard 24 hrs - Average	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Standard : Notification of the National Environment Board No.10, 1995 (B.E.2538), No. 21, 2001 (B.E.2544) and No.24, 2004 (B.E.2547).
Reference Method : US EPA Method Part 53 and 58

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Sarenya C.
Sarenya Chalemtamrong
Scientist (4)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Saratat Mongkonjirawut
Supervisor

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197

Life Sciences

www.alsglobal.com

5281-111/ EMAIL

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL

S:\Reports\Air SOxNOx.rpt (2:25PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED

11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID : 2295408

Date Received : Aug 23, 2022

Date Reported : Aug 31, 2022

Report Number : 2394521-1 C2

Page 1 of 2

Sample Number : 2295408-1 to 7
Parameter : Wind Speed / Wind Direction
Location : โรงพนาผลส่งเสริมสุขภาพตำบลนาพุด (GPS 47P 0735185, 1405871)
Sampling Date : Aug 15 - Aug 22, 2022
Sampling by : Apichart Wilars

Time	Aug 15 - Aug 16, 2022			Aug 16 - Aug 17, 2022			Aug 17 - Aug 18, 2022			Aug 18 - Aug 19, 2022			Aug 19 - Aug 20, 2022			Aug 20 - Aug 21, 2022			Aug 21 - Aug 22, 2022		
	WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)	
09:00 AM - 10:00 AM	1.2	274.0	W	0.9	208.0	SSW	1.1	216.0	SW	1.3	220.0	SW	1.9	179.0	S	2.2	226.0	SW	0.4	171.0	S
10:00 AM - 11:00 AM	1.8	197.0	SSW	0.5	188.0	S	1.5	264.0	W	1.3	234.0	SW	1.3	285.0	WNW	2.3	162.0	SSE	1.2	258.0	WSW
11:00 AM - 12:00 PM	0.4	240.0	WSW	0.3	203.0	SSW	0.4	261.0	W	1.9	214.0	SW	1.3	165.0	SSE	0.7	205.0	SSW	0.5	285.0	WNW
12:00 PM - 01:00 PM	0.9	275.0	W	0.4	197.0	SSW	0.3	188.0	S	1.7	227.0	SW	0.8	186.0	S	2.3	279.0	W	2.2	321.0	NW
01:00 PM - 02:00 PM	1.1	197.0	SSW	0.4	209.0	SSW	0.6	255.0	WSW	1.3	261.0	W	1.8	192.0	SSW	2.1	164.0	SSE	1.9	311.0	NW
02:00 PM - 03:00 PM	0.7	218.0	SW	0.4	217.0	SW	0.4	250.0	WSW	0.7	209.0	SSW	2.5	168.0	SSE	1.2	159.0	SSE	2.1	215.0	SW
03:00 PM - 04:00 PM	1.0	175.0	S	0.6	207.0	SSW	1.4	237.0	WSW	1.1	217.0	SW	2.4	187.0	S	0.8	186.0	S	1.0	211.0	SSW
04:00 PM - 05:00 PM	1.2	138.0	SE	1.4	217.0	SW	0.4	233.0	SW	2.1	187.0	S	2.6	153.0	SSE	0.4	153.0	SSE	0.6	227.0	SW
05:00 PM - 06:00 PM	1.0	210.0	SSW	0.6	211.0	SSW	0.4	230.0	SW	1.1	204.0	SSW	0.4	213.0	SSW	0.9	129.0	SE	1.0	220.0	SW
06:00 PM - 07:00 PM	0.8	297.0	WNW	0.5	227.0	SW	0.3	267.0	W	1.0	231.0	SW	0.4	208.0	SSW	0.6	136.0	SE	1.2	211.0	SSW
07:00 PM - 08:00 PM	0.4	330.0	NNW	0.4	220.0	SW	0.8	304.0	NW	1.6	186.0	S	0.6	251.0	WSW	2.0	132.0	SE	0.4	266.0	W
08:00 PM - 09:00 PM	0.6	330.0	NNW	0.6	211.0	SSW	0.8	228.0	SW	0.4	202.0	SSW	0.4	343.0	NNW	0.9	136.0	SE	1.4	315.0	NW
09:00 PM - 10:00 PM	0.4	344.0	NNW	0.4	266.0	W	2.7	259.0	W	1.9	245.0	WSW	0.4	266.0	W	0.5	159.0	SSE	1.3	223.0	SW
10:00 PM - 11:00 PM	0.4	336.0	NNW	0.4	315.0	NW	2.2	251.0	WSW	1.3	209.0	SSW	0.3	317.0	NW	0.3	280.0	W	1.8	205.0	SSW
11:00 PM - 12:00 AM	0.6	327.0	NNW	0.5	223.0	SW	0.4	262.0	W	2.1	259.0	W	0.4	334.0	NNW	0.6	172.0	S	0.4	209.0	SSW
12:00 AM - 01:00 AM	0.4	334.0	NNW	0.5	205.0	SSW	0.3	214.0	SW	0.4	255.0	WSW	0.3	356.0	N	0.5	201.0	SSW	1.3	208.0	SSW
01:00 AM - 02:00 AM	0.4	335.0	NNW	0.6	209.0	SSW	0.5	274.0	W	0.5	205.0	SSW	1.5	220.0	SW	0.4	253.0	WSW	1.2	251.0	WSW
02:00 AM - 03:00 AM	0.8	319.0	NW	0.4	228.0	SW	0.5	299.0	WNW	0.6	263.0	W	1.8	311.0	NW	0.6	166.0	SSE	2.6	343.0	NNW
03:00 AM - 04:00 AM	1.0	323.0	NW	0.5	211.0	SSW	0.8	239.0	WSW	0.6	311.0	NW	0.6	188.0	S	0.4	272.0	W	1.2	266.0	W
04:00 AM - 05:00 AM	0.6	324.0	NW	0.8	222.0	SW	0.6	280.0	W	0.8	329.0	NNW	0.8	188.0	S	0.5	262.0	W	0.3	317.0	NW
05:00 AM - 06:00 AM	0.6	355.0	N	0.8	212.0	SSW	0.6	291.0	WNW	0.8	212.0	SSW	0.8	182.0	S	0.5	169.0	S	0.4	334.0	NNW
06:00 AM - 07:00 AM	0.4	169.0	S	1.0	256.0	WSW	0.4	276.0	W	1.2	214.0	SW	1.3	177.0	S	0.6	170.0	S	0.5	356.0	N
07:00 AM - 08:00 AM	1.5	254.0	WSW	1.2	216.0	SW	0.8	195.0	SSW	2.1	199.0	SSW	2.4	171.0	S	0.5	148.0	SSE	1.1	220.0	SW
08:00 AM - 09:00 AM	0.5	219.0	SW	1.4	248.0	WSW	1.2	262.0	W	0.6	175.0	S	1.4	170.0	S	1.7	141.0	SE	1.5	221.0	SW

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Sarayuth Jitranont
Assistant General Manager

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAI) AND CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED

11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

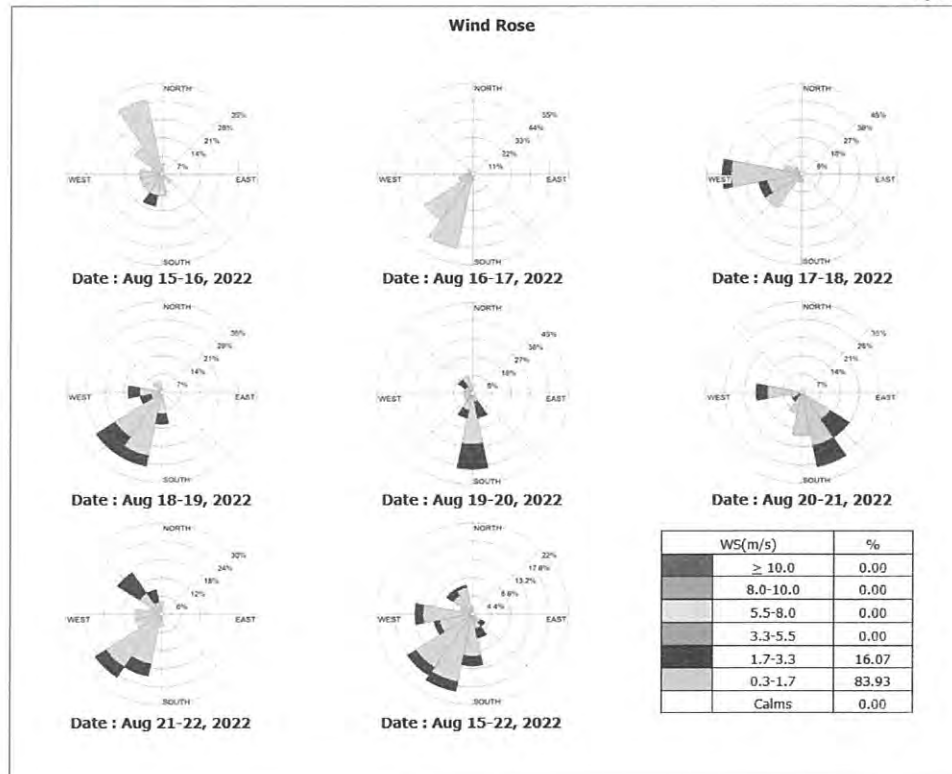
Lot ID : 2295408

Date Received : Aug 23, 2022

Date Reported : Aug 31, 2022

Report Number : 2394521-1 C2

Page 2 of 2



The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Sarayuth Jitranont
Assistant General Manager

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAI) AND CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID : 2295486
Date Received : Aug 23, 2022
Date Reported : Aug 31, 2022
Report Number : 2394575-1 C2

Page 1 of 2

Sample Number : 2295486-1 to 7
Parameter : Wind Speed / Wind Direction
Location : บ้านหนองพูน (GPS 47P 0729829, 1403305)
Sampling Date : Aug 15 - Aug 22, 2022
Sampling by : Apichart Wilars

Time	Aug 15 - Aug 16, 2022			Aug 16 - Aug 17, 2022			Aug 17 - Aug 18, 2022			Aug 18 - Aug 19, 2022			Aug 19 - Aug 20, 2022			Aug 20 - Aug 21, 2022			Aug 21 - Aug 22, 2022		
	WS (m/s)	WD (deg)	S	WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)	
10:00 AM - 11:00 AM	0.5	176.2	S	1.7	232.0	SW	1.4	115.7	ESE	0.7	99.9	E	1.7	91.9	E	0.5	94.7	E	2.6	171.5	S
11:00 AM - 12:00 PM	1.9	170.7	S	0.6	132.2	SE	2.5	113.1	ESE	1.5	96.6	E	0.7	146.9	SSE	2.9	92.7	E	1.4	183.8	S
12:00 PM - 01:00 PM	1.0	165.6	SSE	0.9	131.2	SE	2.0	109.6	ESE	2.5	93.8	E	0.7	180.4	S	0.9	92.4	E	1.0	188.8	S
01:00 PM - 02:00 PM	0.5	162.7	SSE	0.6	130.1	SE	1.0	185.0	S	1.9	89.8	E	0.7	189.2	S	0.8	91.1	E	1.3	168.0	SSE
02:00 PM - 03:00 PM	1.8	159.3	SSE	1.8	129.3	SE	2.2	185.0	S	1.1	88.7	E	0.8	188.8	S	0.4	185.0	S	2.1	138.4	SE
03:00 PM - 04:00 PM	1.2	158.3	SSE	0.9	128.6	SE	0.1	-	-	0.4	89.7	E	1.2	160.3	SSE	2.0	185.0	S	0.4	128.1	SE
04:00 PM - 05:00 PM	2.3	157.5	SSE	1.0	127.5	SE	0.4	185.0	S	0.4	90.4	E	1.0	136.7	SE	0.6	185.0	S	2.5	126.0	SE
05:00 PM - 06:00 PM	0.5	157.7	SSE	1.9	126.8	SE	0.6	106.3	ESE	0.7	91.4	E	0.7	127.5	SE	1.2	200.0	SSW	1.2	125.2	SE
06:00 PM - 07:00 PM	0.5	155.7	SSE	0.4	126.7	SE	0.6	106.5	ESE	0.7	92.5	E	0.8	123.2	ESE	0.3	200.0	SSW	1.0	126.0	SE
07:00 PM - 08:00 PM	0.5	147.5	SSE	1.0	180.0	S	0.5	106.6	ESE	0.7	185.0	S	0.6	110.7	ESE	1.0	201.0	SSW	0.3	180.0	S
08:00 PM - 09:00 PM	0.6	140.7	SE	1.1	185.0	S	0.5	107.0	ESE	0.3	178.0	S	0.8	100.0	E	0.8	89.8	E	0.6	185.0	S
09:00 PM - 10:00 PM	0.8	185.0	S	0.9	185.0	S	0.6	107.1	ESE	0.7	196.0	SSW	0.9	96.4	E	1.3	90.2	E	1.0	184.0	S
10:00 PM - 11:00 PM	0.7	186.0	S	0.4	184.0	S	0.5	106.9	ESE	0.8	185.0	S	0.8	94.7	E	0.1	-	-	1.1	128.2	SE
11:00 PM - 12:00 AM	0.6	185.0	S	0.7	123.9	SE	0.4	107.0	ESE	0.7	189.0	S	0.4	94.6	E	2.2	90.4	E	0.7	127.8	SE
12:00 AM - 01:00 AM	0.5	136.8	SE	1.3	123.9	SE	1.6	107.0	ESE	0.2	-	-	0.5	95.2	E	0.5	90.6	E	0.6	128.0	SE
01:00 AM - 02:00 AM	0.4	136.3	SE	0.3	123.5	ESE	0.9	106.4	ESE	0.6	95.2	E	0.6	95.2	E	0.8	90.3	E	0.8	126.2	SE
02:00 AM - 03:00 AM	0.8	136.4	SE	0.9	123.2	ESE	0.8	106.2	ESE	0.5	95.0	E	0.7	45.0	NE	1.0	90.0	E	0.9	115.8	ESE
03:00 AM - 04:00 AM	0.9	136.5	SE	0.8	122.8	ESE	0.8	200.0	SSW	0.8	95.3	E	0.8	46.0	NE	0.4	200.0	SSW	0.4	109.8	ESE
04:00 AM - 05:00 AM	0.7	135.8	SE	1.9	122.0	ESE	0.7	210.0	SSW	0.6	200.0	SSW	0.2	-	-	0.6	210.0	SSW	0.3	108.1	ESE
05:00 AM - 06:00 AM	0.5	135.9	SE	0.8	122.0	ESE	2.1	230.0	SW	2.6	210.0	SSW	1.0	47.0	NE	0.3	190.0	S	0.4	108.3	ESE
06:00 AM - 07:00 AM	0.6	136.4	SE	2.7	123.6	ESE	0.6	231.0	SW	1.2	201.0	SSW	1.6	46.0	NE	0.2	-	-	0.5	108.2	ESE
07:00 AM - 08:00 AM	0.6	230.0	SW	1.7	122.8	ESE	1.4	235.0	SW	0.6	203.0	SSW	1.8	97.7	E	0.4	185.0	S	1.5	180.0	S
08:00 AM - 09:00 AM	0.4	230.0	SW	0.9	120.8	ESE	0.7	105.8	ESE	0.4	93.7	E	1.4	98.3	E	1.0	101.0	E	1.4	185.0	S
09:00 AM - 10:00 AM	1.1	231.0	SW	1.9	118.7	ESE	1.7	103.6	ESE	0.9	92.1	E	0.8	97.9	E	1.8	145.8	SE	1.6	185.0	S

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Sarayuth Jitranont
Assistant General Manager

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAI) AND CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

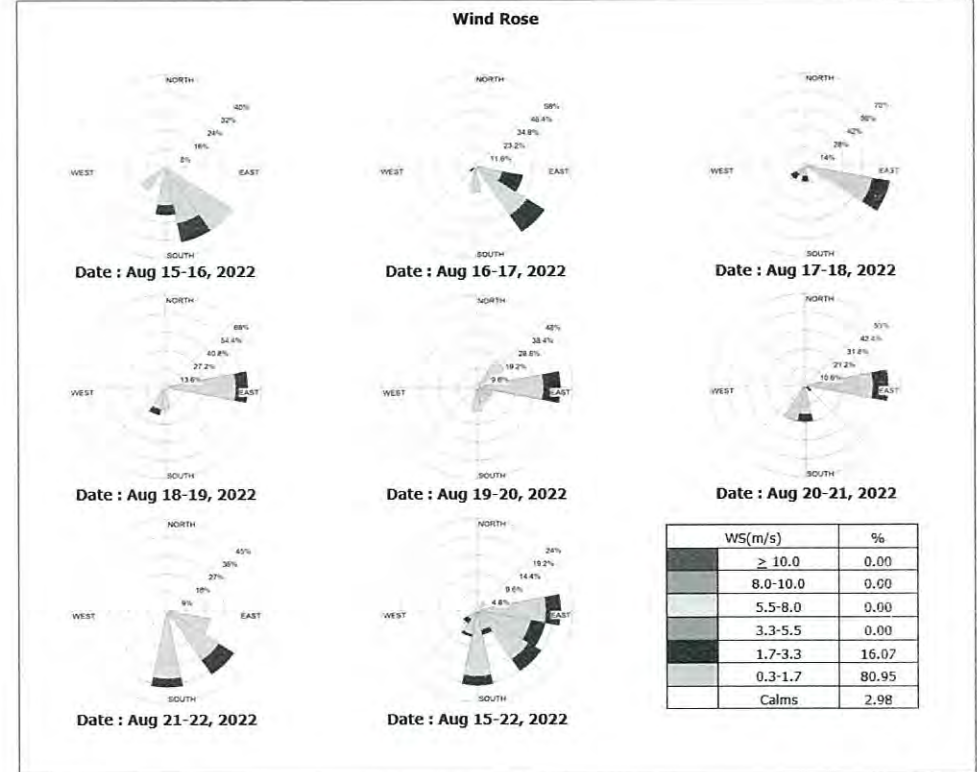
P/O :

Project Name :

Project Location : Glow Phase5

Lot ID : 2295486
Date Received : Aug 23, 2022
Date Reported : Aug 31, 2022
Report Number : 2394575-1 C2

Page 2 of 2



The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Sarayuth Jitranont
Assistant General Manager

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAI) AND CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED

11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID : 2295487

Date Received : Aug 23, 2022

Date Reported : Aug 31, 2022

Report Number : 2394574-1 C2

Page 1 of 2

Sample Number : 2295487-1 to 7
Parameter : Wind Speed / Wind Direction
Location : วัดนาบตูล (GPS 47P 0730822, 1407369)
Sampling Date : Aug 15 - Aug 22, 2022
Sampling by : Apichart Wilars

Time	Aug 15 - Aug 16, 2022			Aug 16 - Aug 17, 2022			Aug 17 - Aug 18, 2022			Aug 18 - Aug 19, 2022			Aug 19 - Aug 20, 2022			Aug 20 - Aug 21, 2022			Aug 21 - Aug 22, 2022		
	WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)	
11:00 AM - 12:00 PM	0.4	256.0	WSW	2.0	190.0	S	0.9	216.0	SW	1.0	221.0	SW	1.1	216.0	SW	1.6	236.0	SW	1.1	257.0	WSW
12:00 PM - 01:00 PM	0.3	21.0	NNE	0.9	252.0	WSW	1.8	205.0	SSW	1.6	192.0	SSW	1.9	251.0	WSW	0.6	260.0	W	0.9	226.0	SW
01:00 PM - 02:00 PM	2.5	230.0	SW	2.1	237.0	WSW	0.9	207.0	SSW	1.3	200.0	SSW	1.0	213.0	SSW	0.6	230.0	SW	1.0	188.0	S
02:00 PM - 03:00 PM	1.2	243.0	WSW	1.4	229.0	SW	1.8	124.0	SE	1.8	272.0	W	1.5	257.0	WSW	0.8	291.0	WNW	1.3	189.0	S
03:00 PM - 04:00 PM	0.3	264.0	W	1.8	226.0	SW	1.5	204.0	SSW	0.6	154.0	SSE	1.0	275.0	W	0.1	-	-	1.2	230.0	SW
04:00 PM - 05:00 PM	0.3	239.0	WSW	0.5	206.0	SSW	1.0	194.0	SSW	2.5	265.0	W	0.4	206.0	SSW	2.4	244.0	WSW	0.9	191.0	S
05:00 PM - 06:00 PM	0.5	243.0	WSW	1.0	246.0	WSW	0.6	195.0	SSW	0.4	89.0	E	1.7	245.0	WSW	1.5	191.0	S	1.3	238.0	WSW
06:00 PM - 07:00 PM	0.6	261.0	W	0.9	235.0	SW	1.2	236.0	SW	0.1	-	-	0.6	233.0	SW	0.3	228.0	SW	1.7	150.0	SSE
07:00 PM - 08:00 PM	0.6	140.0	SE	0.1	-	-	0.7	231.0	SW	0.3	261.0	W	0.1	-	-	0.4	240.0	WSW	0.7	241.0	WSW
08:00 PM - 09:00 PM	0.7	8.0	N	1.1	250.0	WSW	1.0	216.0	SW	0.1	-	-	0.3	359.0	N	0.6	280.0	W	1.1	241.0	WSW
09:00 PM - 10:00 PM	0.3	321.0	NW	2.1	232.0	SW	0.4	256.0	WSW	0.0	-	-	0.6	276.0	W	0.1	-	-	1.0	272.0	W
10:00 PM - 11:00 PM	0.4	17.0	NNE	0.7	245.0	WSW	0.3	21.0	NNE	0.1	-	-	0.0	-	-	0.5	286.0	WNW	0.7	211.0	SSW
11:00 PM - 12:00 AM	1.0	106.0	ESE	0.4	291.0	WNW	0.0	-	-	1.5	233.0	SW	0.0	-	-	0.0	-	-	2.2	205.0	SSW
12:00 AM - 01:00 AM	0.9	23.0	NNE	0.0	-	-	0.1	-	-	1.0	220.0	SW	0.0	-	-	0.0	-	-	1.4	203.0	SSW
01:00 AM - 02:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.3	283.0	WNW	0.6	6.0	N	0.6	226.0	SW
02:00 AM - 03:00 AM	0.0	-	-	0.0	-	-	0.8	261.0	W	0.0	-	-	0.2	-	-	0.2	-	-	1.0	232.0	SW
03:00 AM - 04:00 AM	0.0	-	-	0.2	-	-	0.4	332.0	NNW	0.3	268.0	W	0.0	-	-	0.0	-	-	0.6	301.0	WNW
04:00 AM - 05:00 AM	0.9	263.0	W	0.7	266.0	W	0.0	-	-	0.2	-	-	0.0	-	-	0.0	-	-	0.0	-	-
05:00 AM - 06:00 AM	0.2	-	-	0.9	258.0	WSW	0.0	-	-	0.0	-	-	0.3	287.0	WNW	0.6	298.0	WNW	0.0	-	-
06:00 AM - 07:00 AM	0.3	200.0	SSW	1.5	305.0	NW	0.5	270.0	W	0.0	-	-	0.0	-	-	0.0	-	-	0.2	-	-
07:00 AM - 08:00 AM	0.0	-	-	0.7	234.0	SW	0.3	335.0	NNW	1.0	268.0	W	0.0	-	-	0.0	-	-	0.0	-	-
08:00 AM - 09:00 AM	0.4	262.0	W	0.9	243.0	WSW	0.1	-	-	0.8	236.0	SW	0.2	-	-	0.7	310.0	NW	1.2	258.0	WSW
09:00 AM - 10:00 AM	0.5	235.0	SW	1.1	196.0	SSW	2.9	214.0	SW	0.9	267.0	W	1.4	254.0	WSW	1.0	217.0	SW	1.0	319.0	NW
10:00 AM - 11:00 AM	1.2	197.0	SSW	0.1	-	-	1.7	201.0	SSW	1.7	129.0	SE	1.4	236.0	SW	1.5	220.0	SW	0.8	253.0	WSW

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Sarayuth Jitranont
Assistant General Manager

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197

ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED

11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

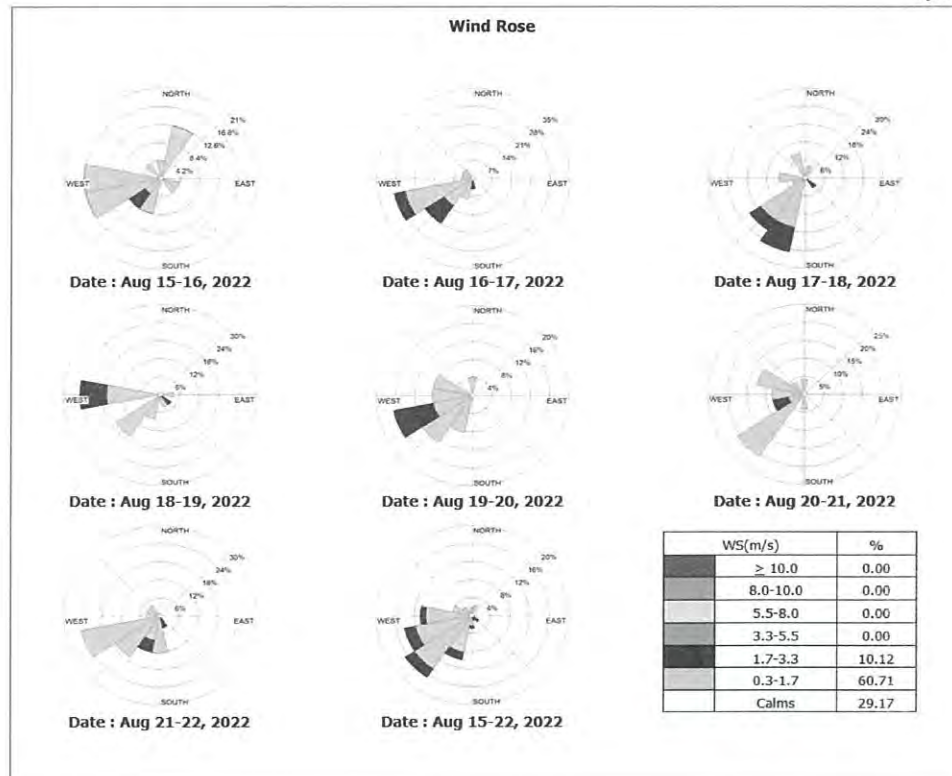
Lot ID : 2295487

Date Received : Aug 23, 2022

Date Reported : Aug 31, 2022

Report Number : 2394574-1 C2

Page 2 of 2



The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Sarayuth Jitranont
Assistant General Manager

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197

ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID : 22145953
Date Received : Dec 13, 2022
Date Reported : Dec 19, 2022
Report Number : 2509711-1

Page 1 of 2

Sample Number : 22145953-1 to 7
Parameter : Wind Speed / Wind Direction
Location : วัดคางนงคคาราม (ทต. นนทบุรี)
Sampling Date : Dec 03 - Dec 10, 2022
Sampling by : Norranon Tathongkham

Time	Dec 03 - Dec 04, 2022			Dec 04 - Dec 05, 2022			Dec 05 - Dec 06, 2022			Dec 06 - Dec 07, 2022			Dec 07 - Dec 08, 2022			Dec 08 - Dec 09, 2022			Dec 09 - Dec 10, 2022		
	WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)	
10:00 AM - 11:00 AM	1.5	12.0	NNE	2.3	199.0	SSW	2.1	81.0	E	1.3	37.0	NE	1.9	24.0	NNE	0.1	-	-	0.4	195.0	SSW
11:00 AM - 12:00 PM	1.7	16.0	NNE	1.0	21.0	NNE	0.8	82.0	E	1.5	302.0	VNW	0.8	24.0	NNE	0.0	-	-	0.5	343.0	NNW
12:00 PM - 01:00 PM	1.3	11.0	N	0.2	-	-	1.5	160.0	SSE	1.3	357.0	N	0.6	2.0	N	0.9	204.0	SSW	0.0	-	
01:00 PM - 02:00 PM	1.6	13.0	NNE	1.6	45.0	NE	1.4	49.0	NE	0.6	349.0	N	0.6	9.0	N	0.7	8.0	N	0.8	359.0	N
02:00 PM - 03:00 PM	0.6	8.0	N	0.7	54.0	NE	0.2	-	-	0.8	10.0	N	0.5	71.0	ENE	1.1	0.0	N	0.0	-	-
03:00 PM - 04:00 PM	0.0	-	-	0.4	80.0	E	0.5	137.0	SE	0.3	76.0	ENE	1.1	5.0	N	1.5	124.0	SE	0.4	46.0	NE
04:00 PM - 05:00 PM	0.1	-	-	0.3	0.0	N	0.9	74.0	ENE	0.1	-	-	0.0	-	-	1.1	200.0	SSW	0.7	95.0	E
05:00 PM - 06:00 PM	1.2	36.0	NE	0.1	-	-	0.5	104.0	ESE	0.5	122.0	ESE	0.1	-	-	0.5	235.0	SW	0.8	84.0	E
06:00 PM - 07:00 PM	0.0	-	-	0.3	78.0	ENE	0.3	110.0	ESE	0.7	131.0	SE	0.2	-	-	0.3	191.0	S	1.5	123.0	ESE
07:00 PM - 08:00 PM	0.6	69.0	ENE	0.5	139.0	SE	0.1	-	-	0.3	114.0	ESE	0.1	-	-	0.7	259.0	W	0.1	-	-
08:00 PM - 09:00 PM	0.3	30.0	NNE	0.8	127.0	SE	0.3	76.0	ENE	0.2	-	-	0.3	254.0	WSW	0.1	-	-	0.3	201.0	SSW
09:00 PM - 10:00 PM	0.1	-	-	0.0	-	-	0.5	152.0	SSE	0.1	-	-	0.4	260.0	W	0.7	80.0	E	0.1	-	-
10:00 PM - 11:00 PM	0.3	14.0	NNE	0.4	105.0	ESE	0.3	211.0	SSW	0.7	151.0	SSE	0.5	24.0	NNE	0.3	52.0	NE	0.3	236.0	SW
11:00 PM - 12:00 AM	0.8	14.0	NNE	0.1	-	-	0.1	-	-	0.3	152.0	SSE	0.2	-	-	0.4	52.0	NE	0.5	274.0	W
12:00 AM - 01:00 AM	0.1	-	-	0.2	-	-	0.3	212.0	SSW	0.1	-	-	0.5	25.0	NNE	0.1	-	-	0.4	274.0	W
01:00 AM - 02:00 AM	0.5	14.0	NNE	0.1	-	-	0.5	213.0	SSW	0.7	86.0	E	0.7	24.0	NNE	0.7	52.0	NE	0.1	-	-
02:00 AM - 03:00 AM	0.1	-	-	0.7	104.0	ESE	0.7	214.0	SW	0.9	86.0	E	0.9	25.0	NNE	1.1	51.0	NE	0.5	274.0	W
03:00 AM - 04:00 AM	0.9	14.0	NNE	1.3	105.0	ESE	1.1	213.0	SSW	0.7	84.0	E	1.7	25.0	NNE	1.7	52.0	NE	0.7	273.0	W
04:00 AM - 05:00 AM	1.3	359.0	N	1.7	104.0	ESE	1.7	213.0	SSW	0.0	-	-	1.9	24.0	NNE	1.9	52.0	NE	1.0	274.0	W
05:00 AM - 06:00 AM	1.9	359.0	N	0.7	104.0	ESE	1.5	94.0	E	0.4	85.0	E	0.7	24.0	NNE	2.1	51.0	NE	1.7	274.0	W
06:00 AM - 07:00 AM	1.5	359.0	N	1.5	104.0	ESE	0.5	136.0	SE	1.0	84.0	E	0.7	342.0	NNW	0.7	52.0	NE	2.1	221.0	SW
07:00 AM - 08:00 AM	1.2	112.0	ESE	1.3	104.0	ESE	0.4	9.0	N	0.0	-	-	1.5	343.0	NNW	0.6	54.0	NE	1.9	28.0	NNE
08:00 AM - 09:00 AM	0.2	-	-	0.9	104.0	ESE	0.7	341.0	NNW	0.6	310.0	NW	2.3	10.0	N	0.1	-	-	0.7	345.0	NNW
09:00 AM - 10:00 AM	0.7	0.0	N	0.7	82.0	E	0.0	-	-	0.7	24.0	NNE	0.7	0.0	N	0.3	353.0	N	0.9	345.0	N

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150

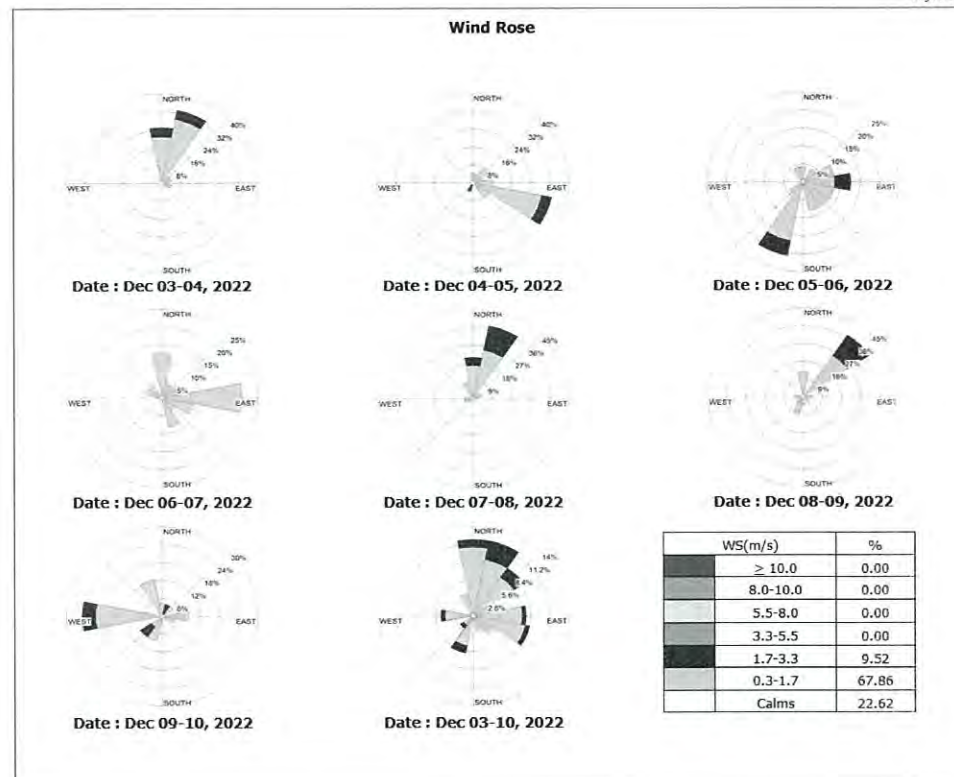
P/O :

Project Name :

Project Location : Glow Phase5

Lot ID : 22145953
Date Received : Dec 13, 2022
Date Reported : Dec 19, 2022
Report Number : 2509711-1

Page 2 of 2



The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Sarayuth Jitranont
Assistant General Manager

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Sarayuth Jitranont
Assistant General Manager

ภาคผนวก ค-2

ใบรายงานผลการติดตามตรวจสอบคุณภาพอากาศจากปล่องระบาย



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2296246
Date Received :Aug 18, 2022
Date Reported :Aug 27, 2022
Report Number :2396188-1

Page 1 of 1

Sample Number 2296246-1
Sample Description Emission from Stationary Source
Location CTG HRSG (Phase 5)
Measurement Date Aug 17, 2022

Stack Description							
Ambient Temperature	30	°C	Diameter	7.60	m	Oxygen	13.86 %
Ambient Pressure	758	mmHg	Shape	Circle		Carbon dioxide	4.19 %
Type of Process	Combustion		Stack Temperature	88	°C	Gas Velocity	16.05 m/s
Type of Fuel	Natural Gas		Moisture	10.94	%	Flow Rate	1919564 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)		Sulfur Dioxide (ppm)	
				at Actual O ₂	at 7% O ₂	at Actual O ₂	at 7% O ₂
1	11:30 AM - 11:50 AM	13.84	4.20	7.58	14.91	0.01	0.03
2	11:51 AM - 12:11 PM	13.85	4.19	7.82	15.43	0.01	0.03
3	12:12 PM - 12:32 PM	13.88	4.18	7.81	15.47	0.01	0.03
Average (ppm)		13.86	4.19	7.74	15.27	0.01	0.03
Guideline ^{1/} (ppm)				-	55	-	0.95
Guideline ^{2/} (ppm)				-	120	-	20
Result (mg/Nm ³)				14.56	28.73	0.04	0.07
Emission Rate at Actual O ₂ (g/s)				7.7615		0.0191	
Guideline ^{1/} (g/s)				27.92		0.67	
Method				US EPA Method 7E		US EPA Method 6C	

Sampled By : Navaphut Sriviriya

Guideline : ^{1/} Environmental Impact Assessment Report of GLOW ENERGY PUBLIC COMPANY LIMITED

^{2/} Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

Technical Management

Wichan Choonharat

Wichan Choonharat
Manager
ทะเบียนเลขที่ 7-204-ค-6113

Approved by

Sarayuth Jitranont

Sarayuth Jitranont
Assistant General Manager
ทะเบียนเลขที่ 7-204-ค-4702

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 104 Phatthanakan Rd., Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250, THAILAND PHONE +66 0 2760 3000 FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2296246
Date Received :Aug 18, 2022
Date Reported :Aug 27, 2022
Report Number :2396188-1

Page 1 of 1

Sample Number 2296246-1
Sample Description Emission from Stationary Source
Location CTG HRSG (Phase 5)
Measurement Date Aug 17, 2022

Stack Description							
Ambient Temperature	30	°C	Diameter	7.60	m	Oxygen	13.86 %
Ambient Pressure	758	mmHg	Shape	Circle		Carbon dioxide	4.19 %
Type of Process	Combustion		Stack Temperature	88	°C	Gas Velocity	16.05 m/s
Type of Fuel	Natural Gas		Moisture	10.94	%	Flow Rate	1919564 Nm3/hr

Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Carbon Monoxide (ppm)	
				at Actual O ₂	At 7% O ₂
1	11:30 AM - 11:50 AM	13.84	4.20	0.36	0.72
2	11:51 AM - 12:11 PM	13.85	4.19	0.33	0.66
3	12:12 PM - 12:32 PM	13.88	4.18	0.30	0.59
Average (ppm)		13.86	4.19	0.33	0.65
Guideline (ppm)				-	690
Result (mg/Nm ³)				0.38	0.75
Emission Rate at Actual O ₂ (g/s)				0.2027	
Method				US EPA Method 10	

Sampled By : Navaphut Sriviriya

Guideline : Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 D, dated December 4, 2006 (B.E. 2549)

Technical Management

Wichan Choonharat

Wichan Choonharat
Manager
ทะเบียนเลขที่ 7-204-ค-6113

Approved by

Sarayuth Jitranont

Sarayuth Jitranont
Assistant General Manager
ทะเบียนเลขที่ 7-204-ค-4702

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 104 Phatthanakan Rd., Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250, THAILAND PHONE +66 0 2760 3000 FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2296248
Date Received : Aug 17, 2022
Date Reported : Aug 25, 2022
Report Number: 2396186-1

Page 1 of 2

Sample Number 2296248-1
Sampled Date Aug 17, 2022
Sample Description Emission from Stationary Source
Location CTG HRSG (Phase 5)
Date Analysis Commenced Aug 18, 2022
Condition of Sample Extracted into one filter paper placed in plastic petri dish and one plastic bottle

Stack Description

Ambient Pressure	758	mmHg	Diameter	7.60	m	Oxygen	13.9	%
Ambient Temperature	30.0	°C	Shape	Circle		Carbon Dioxide	4.2	%
Type of Process	Combustion		Stack Temperature	88.0	°C	Gas Velocity	16.0	m/s
Type of Fuel	Natural Gas		Moisture	11.05	%	Flow Rate (Actual O2)	1915292	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result at 7 % O ₂ at 13.9 % O ₂	Guideline (1)	Guideline (2)	Method	Testing Location
Air Testing									
Total Suspended Particulate	11:20 AM - 12:08 PM	mg/m ³	-	0.5	<0.5	5	60	US EPA, Method 5	Rayong

Guideline :

Guideline (1) Environmental Impact Assessment Report of GLOW ENERGY PUBLIC COMPANY LIMITED.
Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
โทรศัพท์ 2-323-9-9447

Approved by

D. Chuan

Dej Changchon
Senior Manager
โทรศัพท์ 2-323-9-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports_Air Stack_O2_2GL.rpt (4:07PM)



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2296248
Date Received : Aug 17, 2022
Date Reported : Aug 25, 2022
Report Number: 2396186-1

Page 2 of 2

Sample Number 2296248-1
Sampled Date Aug 17, 2022
Sample Description Emission from Stationary Source
Location CTG HRSG (Phase 5)
Date Analysis Commenced Aug 18, 2022
Condition of Sample Extracted into one filter paper placed in plastic petri dish and one plastic bottle

Stack Description

Ambient Pressure	758	mmHg	Diameter	7.60	m	Oxygen	13.9	%
Ambient Temperature	30.0	°C	Shape	Circle		Carbon Dioxide	4.2	%
Type of Process	Combustion		Stack Temperature	88.0	°C	Gas Velocity	16.0	m/s
Type of Fuel	Natural Gas		Moisture	11.05	%	Flow Rate (Actual O2)	1915292	Nm3/hr

Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result Emission Rate	Guideline (1)	Guideline (2)	Method	Testing Location
Air Testing									
Total Suspended Particulate *	11:20 AM - 12:08 PM	g/s	-	-	<0.266	1.35	-	Calculated	Rayong

Guideline :

Guideline (1) Environmental Impact Assessment Report of GLOW ENERGY PUBLIC COMPANY LIMITED.
Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

Sampled By : Panuwat Wangbong

Remark :

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

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)
โทรศัพท์ 2-323-9-9447

Approved by

D. Chuan

Dej Changchon
Senior Manager
โทรศัพท์ 2-323-9-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports_Air Stack_O2_2GL.rpt (4:07PM)

ภาคผนวก ค-2.1

การตรวจสอบความถูกต้องของระบบ CEMs
โดยวิธี Relative Accuracy Test Audit; RATA
และ Relative Response Audit Report; RRA



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase 5

Lot ID: 2296630
Date Received : Sep 23, 2022
Date Reported : Oct 10, 2022
Report Number : 2397544-1

Page 1 of 3

Sample Number 2296630-1
Sampled Date Sep 23, 2022
Sample Description Emission from Stationary Source
Location CTG HRSG (Phase 5)
Parameter NOx

Relative Accuracy Test Audit Report

Run No.	Date	Time		Raw Data at Actual O2		Corrected Value at 7% O2		Difference
		Start	Stop	CEMs (ppm)	RM (ppm)	CEMs (ppm)	RM (ppm)	
1*	23 Sep 22	10:50	11:10	7.49	9.46	14.76	17.73	2.97
2	23 Sep 22	11:11	11:31	7.60	9.36	14.99	17.24	2.25
3*	23 Sep 22	11:32	11:52	7.13	9.24	14.01	16.63	2.63
4	23 Sep 22	11:53	12:13	7.05	8.91	13.78	15.96	2.18
5	23 Sep 22	12:14	12:34	6.91	8.74	13.51	15.64	2.13
6	23 Sep 22	12:35	12:55	6.83	8.63	13.35	15.40	2.05
7	23 Sep 22	12:56	13:16	6.80	8.65	13.28	15.42	2.14
8	23 Sep 22	13:17	13:37	6.64	8.59	12.96	15.30	2.34
9	23 Sep 22	13:38	13:58	6.75	8.64	13.20	15.43	2.23
10	23 Sep 22	13:59	14:19	6.73	8.57	13.15	15.27	2.12
11*	23 Sep 22	14:20	14:40	6.61	8.62	12.91	15.34	2.43
12	23 Sep 22	14:41	15:01	6.74	8.64	13.18	15.39	2.21
Average						13.49	15.67	2.18
Confidence Coefficient (CC)								0.07
Relative Accuracy (Compared with Emission Standard : 55 ppm) (%)								4.09
Relative Accuracy Criteria ^{1/} (Compared with Emission Standard)								≤ 10%

Reference Method : US EPA Method 7E

Remark: * Sample with * is a rejected data

^{1/} Relative Accuracy Criteria of NOx is refer to 40 CFR Part 60 Appendix B : Performance Specification Test 2 (PS-2) compared with Emission Standard 55 ppm at 7%O2
RA Result is within Criteria

Technical Management

Wichan Choonharat
Manager

ทะเบียนเลขที่ ว-204-ค-6113

Approved by

Sarayuth Jitranont
Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-4702

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAILAND) CO., LTD. Part of the ALS Group

Life Sciences

www.alsglobal.com



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase 5

Lot ID: 2296630

Date Received : Sep 23, 2022

Date Reported : Oct 10, 2022

Report Number : 2397544-1

Page 2 of 3

Sample Number 2296630-1
Sampled Date Sep 23, 2022
Sample Description Emission from Stationary Source
Location CTG HRSG (Phase 5)
Parameter SO2

Relative Accuracy Test Audit Report

Run No.	Date	Time		Raw Data at Actual O2		Corrected Value at 7% O2		Difference
		Start	Stop	CEMs (ppm)	RM (ppm)	CEMs (ppm)	RM (ppm)	
1	23 Sep 22	10:50	11:10	0.06	0.06	0.13	0.12	0.00
2	23 Sep 22	11:11	11:31	0.07	0.07	0.13	0.13	0.00
3	23 Sep 22	11:32	11:52	0.06	0.07	0.12	0.12	0.00
4	23 Sep 22	11:53	12:13	0.06	0.07	0.12	0.12	0.00
5*	23 Sep 22	12:14	12:34	0.06	0.07	0.12	0.13	0.01
6	23 Sep 22	12:35	12:55	0.06	0.07	0.12	0.12	0.00
7	23 Sep 22	12:56	13:16	0.06	0.07	0.12	0.13	0.01
8*	23 Sep 22	13:17	13:37	0.06	0.08	0.12	0.14	0.02
9*	23 Sep 22	13:38	13:58	0.06	0.07	0.12	0.13	0.01
10	23 Sep 22	13:59	14:19	0.06	0.06	0.12	0.11	0.00
11	23 Sep 22	14:20	14:40	0.06	0.07	0.12	0.12	0.00
12	23 Sep 22	14:41	15:01	0.06	0.07	0.12	0.12	0.01
Average						0.12	0.12	0.00
Confidence Coefficient (CC)								0.00
Relative Accuracy (Compared with Emission Standard : 0.95 ppm) (%)								0.49
Relative Accuracy Criteria ^{1/} (Compared with Emission Standard)								≤ 10%

Reference Method : US EPA Method 6C

Remark: * Sample with * is a rejected data

^{1/} Relative Accuracy Criteria of SO2 is refer to 40 CFR Part 60 Appendix B : Performance Specification Test 2 (PS-2) compared with Emission Standard 0.95 ppm at 7%O2
RA Result is within Criteria

Technical Management

Wichan Choonharat

Wichan Choonharat
Manager

ทะเบียนเลขที่ ว-204-ค-6113

Approved by

Sarayuth Jittranont

Sarayuth Jittranont
Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-4702

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAILAND) CO., LTD. Part of the ALS Group

Life Sciences

www.alsglobal.com

19584-21/ EMAIL

RIGHT SOLUTIONS RIGHT PARTNER

S:\Reports\Stack_CEMs1.rpt



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase 5

Lot ID: 2296630

Date Received : Sep 23, 2022

Date Reported : Oct 10, 2022

Report Number : 2397544-1

Page 3 of 3

Sample Number 2296630-1
Sampled Date Sep 23, 2022
Sample Description Emission from Stationary Source
Location CTG HRSG (Phase 5)
Parameter O2

Relative Accuracy Test Audit Report

Run No.	Date	Time		Raw Data at Actual		Difference
		Start	Stop	CEMs (%)	RM (%)	
1	23 Sep 22	10:50	11:10	13.85	13.48	-0.37
2	23 Sep 22	11:11	11:31	13.85	13.35	-0.50
3	23 Sep 22	11:32	11:52	13.83	13.18	-0.64
4	23 Sep 22	11:53	12:13	13.79	13.14	-0.65
5	23 Sep 22	12:14	12:34	13.79	13.13	-0.65
6	23 Sep 22	12:35	12:55	13.79	13.11	-0.68
7	23 Sep 22	12:56	13:16	13.78	13.10	-0.68
8	23 Sep 22	13:17	13:37	13.78	13.10	-0.68
9	23 Sep 22	13:38	13:58	13.79	13.11	-0.68
10*	23 Sep 22	13:59	14:19	13.79	13.10	-0.68
11*	23 Sep 22	14:20	14:40	13.79	13.09	-0.70
12*	23 Sep 22	14:41	15:01	13.79	13.10	-0.70
Average				13.80	13.19	-0.61
Confidence Coefficient (CC)						-
Relative Accuracy (Compared in Actual) (%)						0.61
Relative Accuracy Criteria ^{1/} (%)						≤ 1%

Reference Method : US EPA Method 3A

Remark: * Sample with * is a rejected data

^{1/} Relative Accuracy Criteria of O2 is refer to 40 CFR Part 60 Appendix B : Performance Specification Test 3 (PS-3)

RA Result is within Criteria

Sampled By : Saksit Phaisanphisut

Technical Management

Wichan Choonharat
Manager

ทะเบียนเลขที่ ว-204-ค-6113

Approved by

Sarayuth Jittranont
Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-4702

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAILAND) CO., LTD. Part of the ALS Group

Life Sciences

www.alsglobal.com

19584-21/ EMAIL

RIGHT SOLUTIONS RIGHT PARTNER

S:\Reports\Stack_CEMs1.rpt



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

Lot ID: 22115777

Date Received: Sep 24, 2022

Date Reported: Nov 22, 2022

Report Number: 2449026-1

P/O :

Project Name :

Project Location : Glow Phase 5

Page 1 of 3

Sample Number 22115777-1
Sampled Date Sep 23, 2022
Sample Description Emission from Stationary Source
Location CTG HRSG (Phase 5)
Parameter Relative Response Audit

Paired Data Precision And Bias Check Report

Run No.	RM Values (PM ;mg/m ³)		Calculated Statistical Parameters				Criterion (%)	Acceptance
	Train A	Train B						
	C _a	C _b	C _a - C _b	C _a + C _b	C _{avg}	%RSD		
1	0.08	0.08	0.00	0.16	0.08	1.73	25	Pass
2	0.24	0.33	-0.09	0.57	0.29	16.08	25	Pass
3	0.24	0.33	-0.09	0.57	0.29	16.38	25	Pass
4	0.24	0.17	0.07	0.41	0.20	18.18	25	Pass
5	0.16	0.17	-0.01	0.33	0.16	2.14	25	Pass

Reference Method : US EPA Method 5 / PS-11

Remark: RSD = $100 \times |(C_a - C_b)| / (C_a + C_b)$;
RSD = Relative Standard Deviation (%)
C_a = Concentration measured using Train A (mg/m³)
C_b = Concentration measured using Train B (mg/m³)
|(C_a - C_b)| = Absolute Value of the difference between C_a and C_b (mg/m³)

Technical Management

Wichan Choonharat
Manager
ทะเบียนเลขที่ ๖-204-ค-6113

Approved by

Sarayuth Jittrantont
Assistant General Manager
ทะเบียนเลขที่ ๖-204-ค-4702

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAILAND) CO., LTD. Part of the ALS Group

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase 5

Lot ID: 22115777

Date Received: Sep 24, 2022

Date Reported: Nov 22, 2022

Report Number: 2449026-1

Page 2 of 3

Sample Number 22115777-1
Sampled Date Sep 23, 2022
Sample Description Emission from Stationary Source
Location CTG HRSG (Phase 5)
Parameter Relative Response Audit

Relative Response Audit Test Report

Run No.	Date	Time		CEMS Values (mg/m ³)	PM from Equation (mg/m ³)	RM Values (mg/m ³)	Allowable Range		Criterion
		Start	Stop				Minimum	Maximum	
1A	23-Sep-22	10:30	11:18	1.06	0.53	0.08	-0.72	1.78	Pass
1B	23-Sep-22	10:30	11:18	1.06	0.53	0.08	-0.72	1.78	Pass
2A	23-Sep-22	11:25	12:13	1.06	0.53	0.24	-0.72	1.78	Pass
2B	23-Sep-22	11:25	12:13	1.06	0.53	0.33	-0.72	1.78	Pass
3A	23-Sep-22	12:20	13:08	1.06	0.53	0.24	-0.72	1.78	Pass
3B	23-Sep-22	12:20	13:08	1.06	0.53	0.33	-0.72	1.78	Pass
4A	23-Sep-22	13:15	14:03	1.06	0.53	0.24	-0.72	1.78	Pass
4B	23-Sep-22	13:15	14:03	1.06	0.53	0.17	-0.72	1.78	Pass
5A	23-Sep-22	14:10	14:58	1.06	0.53	0.08	-0.72	1.78	Pass
5B	23-Sep-22	14:10	14:58	1.06	0.53	0.17	-0.72	1.78	Pass

Remark: -All sets of PM CEMS Values and RM Values fall within area on the linear equation line ($Y = 0.1575x + 0.3613$), offset at a distance of ± 25 percent of the emission limit. The results passed the RRA criteria.

-Relative Response Audit is refer to 40 CFR Part 60 Appendix B : Performance Specification 11 : Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Source (PS-11)

-Emission limit 5 mg/m3 from Environmental Impact Assessment Report of Glow Energy PCL. (Phase 5)

Technical Management

Wichan Choonharat

Manager

ทะเบียนเลขที่ ว-204-ค-6113

Approved by

Sarayuth Jitranont

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-4702

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAILAND) CO., LTD. Part of the ALS Group

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

Lot ID: 22115777

Date Received: Sep 24, 2022

Date Reported: Nov 22, 2022

Report Number: 2449026-1

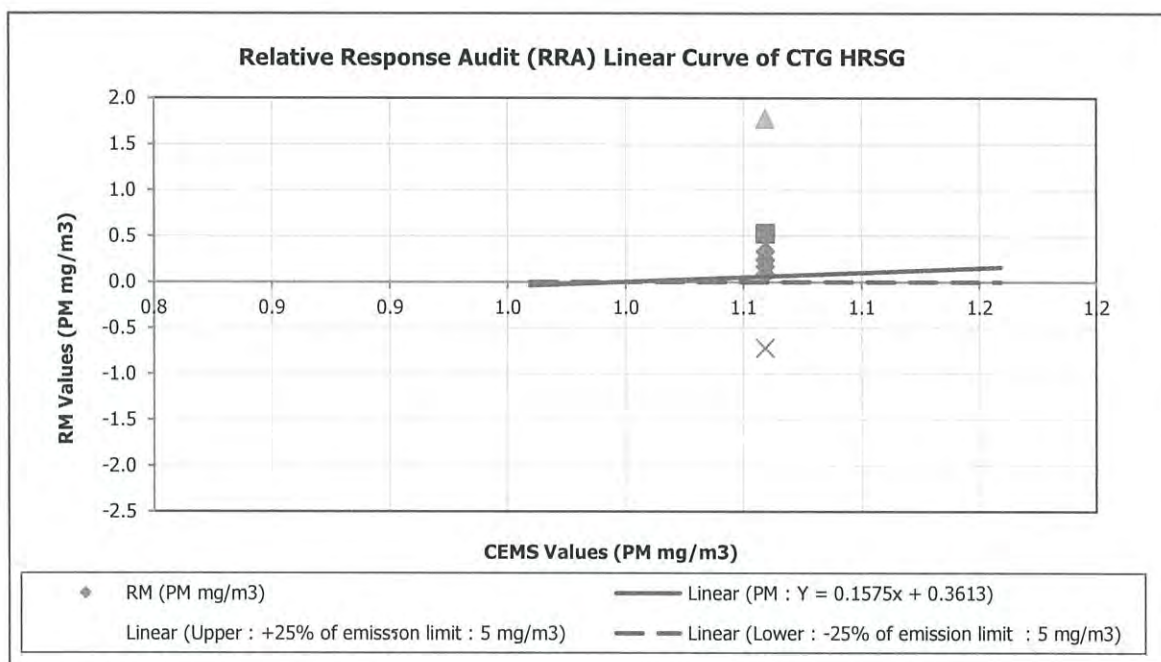
P/O :

Project Name :

Project Location : Glow Phase 5

Page 3 of 3

Sample Number 22115777-1
Sampled Date Sep 23, 2022
Sample Description Emission from Stationary Source
Location CTG HRSG (Phase 5)
Parameter Relative Response Audit



Sampled By : Kantaphon Maneesampan, Chatchai Sukpia

Technical Management

Wichan Choonharat

Wichan Choonharat

Manager

ทะเบียนเลขที่ ว-204-ค-6113

Approved by

Sarayuth Jittrant

Sarayuth Jittrant

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-4702

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 104 Phatthanakan Rd., Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAILAND) CO., LTD. Part of the ALS Group

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

ภาคผนวก ค-3

ผลการประเมินการระบายก๊าซเรือนกระจก (ก๊าซคาร์บอนไดออกไซด์ (CO₂))

การประเมินการระบายก๊าซเรือนกระจก (Glow Phase 5) ประจำปี 2565

1. ใช้ Natural gas เป็นเชื้อเพลิง

[illegible]

ภาคผนวก ค-4

ใบรายงานผลการติดตามตรวจสอบคุณภาพน้ำทิ้ง (น้ำทะเล)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5



TESTING
No.0042
Lot ID: 2283170
Date Received : Jul 06, 2022
Date Reported : Jul 12, 2022
Report Number : 2366544-1

Page 1 of 1

Sample Number	2283170-1
Sampled Date	Jul 06, 2022 2:10 PM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Jul 06, 2022
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	8.0	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	35.5	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32600	(1)	APHA (2017), 2540 C	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Sampled By : Pitthaya Thongtaeng

Remark :

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

Technical Management

N. Banchongkit

Narumon Banchongkit
Supervisor

โทรศัพท์ ๖-๓๒๓-๙-๙๔๔๕

Approved by

D. Changchon

Dej Changchon
Senior Manager

โทรศัพท์ ๖-๓๒๓-๙-๙๔๔๕

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports\All_GL_rpt (2.48PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2283170

Date Received : Jul 06, 2022
Date Reported : Jul 12, 2022
Report Number : 2366544-2

Page 1 of 1

Sample Number	2283170-1
Sampled Date	Jul 06, 2022 2:10 PM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Jul 07, 2022
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47700	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.9	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	34.2	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	3.4	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Sampled By : Pitthaya Thongtaeng

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports\All_GL_rpt (2.48PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5



TESTING
No.0042

Lot ID: 2285304
Date Received : Jul 14, 2022
Date Reported : Jul 21, 2022
Report Number : 2371636-1

Page 1 of 1

Sample Number	2285304-1
Sampled Date	Jul 14, 2022 11:11 AM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Jul 14, 2022
Condition of Sample	Contained in one BOD bottle and two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	8.1	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	33.8	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	28050	(1)	APHA (2017), 2540 C	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Sampled By : Tanasit Wongsachai

Remark :

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

Technical Management

N. Banachon

Narumon Banachonkit
Supervisor
โทรศัพท์ ๖-323-๙-๙445

Approved by

D. Changchon

Dej Changchon
Senior Manager
โทรศัพท์ ๖-323-๙-๙442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phrakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

15984-21/ EMAIL

S:\Reports\ALR_GL_rpt (2:17PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2285304

Date Received : Jul 14, 2022
Date Reported : Jul 21, 2022
Report Number : 2371636-2

Page 1 of 1

Sample Number	2285304-1
Sampled Date	Jul 14, 2022 11:11 AM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Jul 15, 2022
Condition of Sample	Contained in one BOD bottle and two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46920	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.5	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	29.4	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	4.7	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Sampled By : Tanasit Wongsachai

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phrakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

15984-21/ EMAIL

S:\Reports\ALR_GL_rpt (2:17PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5



TESTING
No.0042

Lot ID: 2285309
Date Received : Jul 14, 2022
Date Reported : Jul 21, 2022
Report Number : 2371657-1

Page 1 of 1

Sample Number	2285309-1
Sampled Date	Jul 14, 2022 11:11 AM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Jul 15, 2022
Condition of Sample	Contained in two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	26	≤50	APHA (2017), 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Sampled By : Tanasit Wongsachai

Remark :

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

Technical Management

N. Banchookit

Narumon Banchookit
Supervisor
โทร: 09-099-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
โทร: 09-099-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports\AL_GL.rpt (10:54AM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5



TESTING
No.0042

Lot ID: 2285664
Date Received : Jul 20, 2022
Date Reported : Jul 26, 2022
Report Number : 2372557-1

Page 1 of 1

Sample Number	2285664-1
Sampled Date	Jul 20, 2022 4:00 PM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Jul 20, 2022
Condition of Sample	Contained in one BOD bottle and two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	8.0	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	32.8	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	34450	37450 (1)	APHA (2017), 2540 C	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,450 mg/L (Refer to Lot ID 2285622-1)

Sampled By : Paramet Sattayakun

Remark :

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

Technical Management

N. Banchookit

Narumon Banchookit
Supervisor
โทร: 09-099-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
โทร: 09-099-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports\AL_GL.rpt (2:07PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID: 2285664

Date Received : Jul 20, 2022

Date Reported : Jul 26, 2022

Report Number : 2372557-2

Page 1 of 1

Sample Number	2285664-1						
Sampled Date	Jul 20, 2022 4:00 PM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Jul 21, 2022						
Condition of Sample	Contained in one BOD bottle and two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	48300	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.4	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	30.1	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	1.3	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,450 mg/L (Refer to Lot ID 2285622-1)

Sampled By : Paramet Sattayakun

Remark :

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

Approved by

N. Banchoangkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports\All_GL_rpt (2/07PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5



TESTING

No.0042

Lot ID: 2285665

Date Received : Jul 27, 2022

Date Reported : Aug 02, 2022

Report Number : 2372556-1

Page 1 of 1

Sample Number	2285665-1						
Sampled Date	Jul 27, 2022 11:20 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Jul 27, 2022						
Condition of Sample	Contained in two plastic bottles and one BOD bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	8.2	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	34.1	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	31050	(1)	APHA (2017), 2540 C	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Sampled By : Paramet Sattayakun

Remark :

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

Technical Management

N. Banchoangkit

Narumon Banchongkit
Supervisor
หมายเลขโทรศัพท์ 3-323-9-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
หมายเลขโทรศัพท์ 3-323-9-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports\All_GL_rpt (4:43PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2285665

Date Received : Jul 27, 2022
Date Reported : Aug 02, 2022
Report Number : 2372556-2

Page 1 of 1

Sample Number	2285665-1
Sampled Date	Jul 27, 2022 11:20 AM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Jul 29, 2022
Condition of Sample	Contained in two plastic bottles and one BOD bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45190	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.6	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	29.0	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	0.8	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Sampled By : Paramet Sattayakun

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

Approved by

N. Banachkit

Narumon Banachkit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports\AL_GL.rpt (4-43PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5



TESTING

No.0042

Lot ID: 2294393

Date Received : Aug 03, 2022
Date Reported : Aug 10, 2022
Report Number : 2391722-1

Page 1 of 1

Sample Number	2294393-1
Sampled Date	Aug 03, 2022 10:45 AM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Aug 03, 2022
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	7.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	34.1	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	31900	37450 (1)	APHA (2017), 2540 C	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,450 mg/L (Refer to Lot ID 2293889-1)

Sampled By : Paramet Sattayakun

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

Technical Management

N. Banachkit

Narumon Banachkit
Supervisor
หมายเลขที่ 323-3-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
หมายเลขที่ 323-3-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports\AL_GL.rpt (3:25PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID: 2294393

Date Received : Aug 03, 2022

Date Reported : Aug 10, 2022

Report Number : 2391722-2

Page 1 of 1

Sample Number	2294393-1
Sampled Date	Aug 03, 2022 10:45 AM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Aug 04, 2022
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	44980	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.8	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	28.1	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	1.5	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,450 mg/L (Refer to Lot ID 2293889-1)

Sampled By : Paramet Sattayakun

Remark :

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

Approved by

N. Banchookit

Narumon Banchongkit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports\All_GL.rpt (3:26PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5



TESTING

No.0042

Lot ID: 2296576

Date Received : Aug 10, 2022

Date Reported : Aug 18, 2022

Report Number : 2397489-1

Page 1 of 1

Sample Number	2296576-1
Sampled Date	Aug 10, 2022 10:50 AM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Aug 10, 2022
Condition of Sample	Contained in one amber glass bottle, four plastic bottles and one BOD bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C	-	-	-	7.8	5.5-9.0 (B)	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	35.3	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33150	39150 (1)	APHA (2017), 2540 C	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 34,150 mg/L (Refer to Lot ID 2294321-1)

Sampled By : Paramet Sattayakun

Remark :

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

Technical Management

N. Banchookit

Narumon Banchongkit
Supervisor
หมายเลขโทรศัพท์ 3-323-4-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
หมายเลขโทรศัพท์ 3-323-4-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-23/ EMAIL

S:\Reports\All_GL.rpt (4:38PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2296576

Date Received : Aug 10, 2022
Date Reported : Aug 18, 2022
Report Number : 2397489-2

Page 1 of 1

Sample Number	2296576-1
Sampled Date	Aug 10, 2022 10:50 AM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Aug 11, 2022
Condition of Sample	Contained in one amber glass bottle, four plastic bottles and one BOD bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46670	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.6	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	29.8	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	0.8	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 34,150 mg/L (Refer to Lot ID 2294321-1)

Sampled By : Paramet Sattayakun

Remark :

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

Approved by

N. Banchookit

Narumon Banchookit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ ENAB

S:\Reports\All_GL_rpt (4:39PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5



TESTING

No.0042

Lot ID: 2296579

Date Received : Aug 17, 2022
Date Reported : Aug 24, 2022
Report Number : 2397490-1

Page 1 of 1

Sample Number	2296579-1
Sampled Date	Aug 17, 2022 3:05 PM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Aug 17, 2022
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
Oil & Grease *	mg/L	-	1	2	≤5	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	7.9	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	34.5	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	-	5	32850	36600 (1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	APHA (2017), 2540 D	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 31,600 mg/L (Refer to Lot ID 2294323-1)

Sampled By : Paramet Sattayakun

Remark :

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

Technical Management

N. Banchookit

Narumon Banchookit
Supervisor

ทะเบียนเลขที่ 2-323-2-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ 2-323-2-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ ENAB

S:\Reports\All_GL_rpt (2:12PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID: 2296579

Date Received : Aug 17, 2022

Date Reported : Aug 24, 2022

Report Number : 2397490-2

Page 1 of 1

Sample Number	2296579-1
Sampled Date	Aug 17, 2022 3:05 PM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Aug 18, 2022
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47830	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.7	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	29.7	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	2.7	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 31,600 mg/L (Refer to Lot ID 2294323-1)

Sampled By : Paramet Sattayakun

Remark :

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

Approved by

N. Banchookit

Narumon Banchookit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-217 EMAIL

S:\Reports\All_GL_rpt (3-12PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5



TESTING

No.0042

Lot ID: 2296577

Date Received : Aug 24, 2022

Date Reported : Aug 31, 2022

Report Number : 2397488-1

Page 1 of 1

Sample Number	2296577-1
Sampled Date	Aug 24, 2022 10:50 AM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Aug 24, 2022
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	8.1	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	35.2	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	-	5	33800	37700 (1)	APHA (2017), 2540 C	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,700 mg/L (Refer to Lot ID 2294324-1)

Sampled By : Paramet Sattayakun

Remark :

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

Technical Management

N. Banchookit

Narumon Banchookit
Supervisor

หมายเลขโทรศัพท์ 3-323-4-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager

หมายเลขโทรศัพท์ 3-323-4-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-217 EMAIL

S:\Reports\All_GL_rpt (4-44PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2296577

Date Received : Aug 24, 2022
Date Reported : Aug 31, 2022
Report Number : 2397488-2

Page 1 of 1

Sample Number	2296577-1						
Sampled Date	Aug 24, 2022 10:50 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Aug 25, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45490	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.5	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	29.6	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	1.4	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,700 mg/L (Refer to Lot ID 2294324-1)

Sampled By : Paramet Sattayakun

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

Approved by

N. Banchookit

Narumon Banchongkit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports\AL_GL_rpt (4-4494)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5



TESTING
No.0042

Lot ID: 2296578

Date Received : Aug 31, 2022
Date Reported : Sep 07, 2022
Report Number : 2397486-1

Page 1 of 1

Sample Number	2296578-1						
Sampled Date	Aug 31, 2022 10:45 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Aug 31, 2022						
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	7.8	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	35.2	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	-	5	32400	36250 (1)	APHA (2017), 2540 C	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 31,250 mg/L (Refer to Lot ID 2294325-1)

Sampled By : Paramet Sattayakun

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

Technical Management

N. Banchookit

Narumon Banchongkit
Supervisor

โทรศัพท์ 03-323-9-9445

Approved by

D. Chamon

Dej Changchon
Senior Manager

โทรศัพท์ 03-323-9-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports\AL_GL_rpt (4-1494)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2296578
Date Received : Aug 31, 2022
Date Reported : Sep 07, 2022
Report Number : 2397486-2

Page 1 of 1

Sample Number	2296578-1						
Sampled Date	Aug 31, 2022 10:45 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Sep 01, 2022						
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45900	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.2	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	28.3	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	1.0	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 31,250 mg/L (Refer to Lot ID 2294325-1)

Sampled By : Paramet Sattayakun

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

Approved by

N. Banchookit

Narumon Banchongkit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

15984-217 EMAIL

S:\Reports\AIL_GL\pt (4-15PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5



TESTING
No.0042

Lot ID: 22102476
Date Received : Sep 07, 2022
Date Reported : Sep 26, 2022
Report Number : 2435100-1 C2-2

Page 1 of 1

Sample Number	22102476-3						
Sampled Date	Sep 07, 2022 10:50 AM						
Sample Description	Wastewater						
Location	Collected Discharge Point						
Date Analysis Commenced	Sep 07, 2022						
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	8.0	5.5-9.0 (B)	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	33.6	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	31150	≤36150 (1)	APHA (2017), 2540 C	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 31,250 mg/L (Refer to Lot ID 2294325-1)

Sampled By : Paramet Sattayakun

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

Technical Management

N. Banchookit

Narumon Banchongkit
Supervisor

หมายเลขโทรศัพท์ 323-9-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager

หมายเลขโทรศัพท์ 323-9-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-1117 EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location: Glow Phase5

Lot ID: 22102476

Date Received : Sep 07, 2022
Date Reported : Sep 26, 2022
Report Number : 2435100-2 C2-2

Page 1 of 1

Sample Number	22102476-3
Sampled Date	Sep 07, 2022 10:50 AM
Sample Description	Wastewater
Location	Collected Discharge Point
Date Analysis Commenced	Sep 08, 2022
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	~	0.5	46770	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	~	0.1	7.2	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	~	0.1	27.4	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	~	0.1	1.1	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 31,250 mg/L (Refer to Lot ID 2294325-1)

Sampled By : Paramet Sattayakun

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

Approved by

N. Banchookit

Narumon Banchookit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location: Glow Phase5



TESTING

No.0042

Lot ID: 22102477

Date Received : Sep 14, 2022
Date Reported : Sep 22, 2022
Report Number : 2435385-1

Page 1 of 1

Sample Number	22102477-3
Sampled Date	Sep 14, 2022 10:05 AM
Sample Description	Wastewater
Location	Collected Discharge Point
Date Analysis Commenced	Sep 14, 2022
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	8.0	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	32.3	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	-	5	34850	≤39000 (1)	APHA (2017), 2540 C	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 34,000 mg/L (Refer to Lot ID 22107401-1)

Sampled By : Paramet Sattayakun

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

Technical Management

N. Banchookit

Narumon Banchookit
Supervisor
โทรศัพท์ ๖-๓๒๓-๙๔๔๕

Approved by

D. Changchon

Dej Changchon
Senior Manager
โทรศัพท์ ๖-๓๒๓-๙๔๔๕

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL

S:\Reports\AL_GL.rpt (3:05PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102477
Date Received : Sep 14, 2022
Date Reported : Sep 22, 2022
Report Number : 2435385-2

Page 1 of 1

Sample Number	22102477-3						
Sampled Date	Sep 14, 2022 10:05 AM						
Sample Description	Wastewater						
Location	Collected Discharge Point						
Date Analysis Commenced	Sep 15, 2022						
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	48040	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.6	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	30.3	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	3.4	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 34,000 mg/L (Refer to Lot ID 22107401-1)

Sampled By : Paramet Sattayakun

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

Approved by

N. Banchongkit

Narumon Banchongkit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5781-111/ EMAIL

S:\Reports\AL_GL.rpt (3:05PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5



TESTING
No.0042

Lot ID: 22102478
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 2449556-1

Page 1 of 1

Sample Number	22102478-3						
Sampled Date	Sep 21, 2022 12:00 PM						
Sample Description	Wastewater						
Location	Collected Discharge Point (WW3)						
Date Analysis Commenced	Sep 21, 2022						
Condition of Sample	Contained in four glass vials, one BOD bottle, three amber glass bottles and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	8.0	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	34.8	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	35800	≤37750 (1)	APHA (2017), 2540 C	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,750 mg/L (Refer to Lot ID 22102490-1)

Sampled By : Paramet Sattayakun, Thanasoun Namakunna

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

Technical Management

N. Banchongkit

Narumon Banchongkit
Supervisor

ทะเบียนเลขที่ 3-323-3-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ 3-323-3-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5781-111/ EMAIL

S:\Reports\AL_GL.rpt (10:29AM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5



TESTING
No.0042
Lot ID: 22102478
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 2449556-4

Page 1 of 1

Sample Number	22102478-3
Sampled Date	Sep 21, 2022 12:00 PM
Sample Description	Wastewater
Location	Collected Discharge Point (WW3)
Date Analysis Commenced	Sep 22, 2022
Condition of Sample	Contained in four glass vials, one BOD bottle, three amber glass bottles and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	APHA (2017), 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,750 mg/L (Refer to Lot ID 22102490-1)

Sampled By : Paramet Sattayakun , Thanasoun Namakunna

Remark :

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

Technical Management

N. Banchoit

Narumon Banchoikit
Supervisor
โทรศัพท์ ๖-323-๙-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
โทรศัพท์ ๖-323-๙-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL

S:\Reports\AL_GL.rpt (10:29AM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102478
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 2449556-5

Page 1 of 1

Sample Number	22102478-3
Sampled Date	Sep 21, 2022 12:00 PM
Sample Description	Wastewater
Location	Collected Discharge Point (WW3)
Date Analysis Commenced	Sep 22, 2022
Condition of Sample	Contained in four glass vials, one BOD bottle, three amber glass bottles and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	48180	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.4	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	30.0	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	1.3	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,750 mg/L (Refer to Lot ID 22102490-1)

Sampled By : Paramet Sattayakun , Thanasoun Namakunna

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL

S:\Reports\AL_GL.rpt (10:30AM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

TESTING
No.0042
Lot ID: 22102479
Date Received : Sep 28, 2022
Date Reported : Oct 05, 2022
Report Number : 2449903-1



Sample Number	22102479-3
Sampled Date	Sep 28, 2022 12:15 PM
Sample Description	Wastewater
Location	Collected Discharge Point (WW3)
Date Analysis Commenced	Sep 28, 2022
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	8.1	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	32.7	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	-	5	32450	37200 (1)	APHA (2017), 2540 C	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,200 mg/L (Refer to Lot ID 22102491-1)

Sampled By : Paramet Sattayakun

Remark :

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

Technical Management

N. Banphit

Narumon Banchongkit
Supervisor
โทรศัพท์ 3-323-9-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
โทรศัพท์ 3-323-9-9442

* The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5283-111/EMAB

S:\Reports\AI_LGLpt (1-51PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102479
Date Received : Sep 28, 2022
Date Reported : Oct 05, 2022
Report Number : 2449903-2

Sample Number	22102479-3
Sampled Date	Sep 28, 2022 12:15 PM
Sample Description	Wastewater
Location	Collected Discharge Point (WW3)
Date Analysis Commenced	Sep 29, 2022
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47390	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.4	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	29.1	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	2.6	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,200 mg/L (Refer to Lot ID 22102491-1)

Sampled By : Paramet Sattayakun

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5283-111/EMAB

S:\Reports\AI_LGLpt (1-54PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5



TESTING
No.0042
Lot ID: 22114143
Date Received : Oct 05, 2022
Date Reported : Dec 13, 2022
Report Number : 2456201-1 C1

Page 1 of 1

Sample Number	22114143-3
Sampled Date	Oct 05, 2022 9:45 AM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Oct 05, 2022
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	7.9	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	33.8	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	-	5	34800	≤40300 (1)	APHA (2017), 2540 C	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 35,300 mg/L (Refer to Lot ID 22114802-1)

Remark :

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

Technical Management

N. Banchookit

Narumon Banchookit
Supervisor
เบอร์โทร 323-3-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
เบอร์โทร 323-3-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22114143
Date Received : Oct 05, 2022
Date Reported : Dec 13, 2022
Report Number : 2456201-2 C1

Page 1 of 1

Sample Number	22114143-3
Sampled Date	Oct 05, 2022 9:45 AM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Oct 06, 2022
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47640	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.5	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	30.4	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	1.0	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 35,300 mg/L (Refer to Lot ID 22114802-1)

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5



TESTING
No.0042
Lot ID: 22114144
Date Received : Oct 12, 2022
Date Reported : Dec 13, 2022
Report Number : 2467860-1 C1

Page 1 of 1

Sample Number	22114144-3						
Sampled Date	Oct 12, 2022 11:25 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Oct 12, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	7.8	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	34.3	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	-	5	30900	≤34850 (1)	APHA (2017), 2540 C	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 29,850 mg/L (Refer to Lot ID 22114213-1)

Sampled By : Paramet Sattayakun

Remark :

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

Technical Management

N. Banchoangkit

Narumon Banchongkit
Supervisor
หมายเลขโทรศัพท์ 3-323-9-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
หมายเลขโทรศัพท์ 3-323-9-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22114144
Date Received : Oct 12, 2022
Date Reported : Dec 13, 2022
Report Number : 2467860-3 C1

Page 1 of 1

Sample Number	22114144-3						
Sampled Date	Oct 12, 2022 11:25 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Oct 13, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45710	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.3	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	28.9	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	1.6	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 29,850 mg/L (Refer to Lot ID 22114213-1)

Sampled By : Paramet Sattayakun

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5



TESTING
No.0042
Lot ID: 22127270
Date Received : Oct 19, 2022
Date Reported : Dec 13, 2022
Report Number : 2466012-1 C1

Page 1 of 1

Sample Number	22127270-1
Sampled Date	Oct 19, 2022 10:30 AM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Oct 20, 2022
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	~	2	<2	≤20	APHA (2017), 5210 B	Rayong
pH at 25 degree C		~	~	8.1	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature	Degree C	~	~	32.7	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	~	5	32800	≤39300 (1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	~	5	<5	≤50	APHA (2017), 2540 D	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 34,300 mg/L (Refer to Lot ID 22127351-1)

Sampled By : Chainusorn Lertnathakunchai

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

Technical Management

N. Banchookit

Narumon Banchookit
Supervisor
หมายเลข 323-3-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
หมายเลข 323-3-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phrakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22127270
Date Received : Oct 19, 2022
Date Reported : Dec 13, 2022
Report Number : 2466012-2 C1

Page 1 of 1

Sample Number	22127270-1
Sampled Date	Oct 19, 2022 10:30 AM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Oct 20, 2022
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	~	0.5	47690	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	~	0.1	5.1	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	~	0.1	29.4	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	~	0.1	1.7	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 34,300 mg/L (Refer to Lot ID 22127351-1)

Sampled By : Chainusorn Lertnathakunchai

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phrakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5



TESTING
No.0042
Lot ID: 22129908
Date Received : Oct 26, 2022
Date Reported : Dec 13, 2022
Report Number : 2472461-1 C1

Page 1 of 1

Sample Number	22129908-1						
Sampled Date	Oct 26, 2022 10:35 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Oct 27, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	7.9	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature	Degree C	-	-	33.5	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	-	5	33500	≤38400 (1)	APHA (2017), 2540 C	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 33,400 mg/L (Refer to Lot ID 22114214-1)

Sampled By : Paramet Sattayakun

Remark :

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

Technical Management

N. Banphit

Narumon Banchongkit
Supervisor
หมายเลขโทรศัพท์ ๖-323-๙-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
หมายเลขโทรศัพท์ ๖-323-๙-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22129908
Date Received : Oct 26, 2022
Date Reported : Dec 13, 2022
Report Number : 2472461-2 C1

Page 1 of 1

Sample Number	22129908-1						
Sampled Date	Oct 26, 2022 10:35 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Oct 27, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47660	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.4	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	28.3	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	4.3	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 33,400 mg/L (Refer to Lot ID 22114214-1)

Sampled By : Paramet Sattayakun

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5



TESTING
No.0042
Lot ID: 22133060
Date Received : Nov 02, 2022
Date Reported : Dec 13, 2022
Report Number : 2478997-1 C1

Page 1 of 1

Sample Number	22133060-1						
Sampled Date	Nov 02, 2022 11:15 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Nov 02, 2022						
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	8.2	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	33.3	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	-	5	32500	≤37000 (1)	APHA (2017), 2540 C	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,000 mg/L (Refer to Lot ID 22133161-1)

Sampled By : Paramet Sattayakun

Remark :

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

Technical Management

N. Banphit

Narumon Banchongkit
Supervisor

ทะเบียนเลขที่ ว-323-จ-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager

ทะเบียนเลขที่ ว-323-ก-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phrakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133060
Date Received : Nov 02, 2022
Date Reported : Dec 13, 2022
Report Number : 2478997-2 C1

Page 1 of 1

Sample Number	22133060-1						
Sampled Date	Nov 02, 2022 11:15 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Nov 03, 2022						
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	~	0.5	52470	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	~	0.1	7.1	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	~	0.1	29.0	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	~	0.1	5.8	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,000 mg/L (Refer to Lot ID 22133161-1)

Sampled By : Paramet Sattayakun

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phrakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5



TESTING
No.0042
Lot ID: 22133076
Date Received : Nov 09, 2022
Date Reported : Dec 13, 2022
Report Number : 2479006-1 C1

Page 1 of 1

Sample Number	22133076-1						
Sampled Date	Nov 09, 2022 10:45 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Nov 09, 2022						
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	8.1	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature	Degree C	-	-	32.6	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	-	5	33800	≤38450 (1)	APHA (2017), 2540 C	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 33,450 mg/L (Refer to Lot ID 22133215-1)

Sampled By : Chainusorn Lertnanthakunchai

Remark :

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

Technical Management

N. Banphit

Narumon Banchongkit
Supervisor
หมายเลข ๖-323-๙-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
หมายเลข ๖-323-๙-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22133076
Date Received : Nov 09, 2022
Date Reported : Dec 13, 2022
Report Number : 2479006-2 C1

Page 1 of 1

Sample Number	22133076-1						
Sampled Date	Nov 09, 2022 10:45 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Nov 10, 2022						
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	49440	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.3	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	30.1	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	2.1	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 33,450 mg/L (Refer to Lot ID 22133215-1)

Sampled By : Chainusorn Lertnanthakunchai

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5



TESTING
No.0042
Lot ID: 22133077
Date Received : Nov 16, 2022
Date Reported : Dec 13, 2022
Report Number : 2479004-1 C1

Page 1 of 1

Sample Number	22133077-1
Sampled Date	Nov 16, 2022 2:45 PM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Nov 17, 2022
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	APHA (2017), 5210 B	Rayong
pH at 25 degree C		-	-	7.4	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature	Degree C	-	-	33.6	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	-	5	35100	≤39750 (1)	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	APHA (2017), 2540 D	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 34,750 mg/L (Refer to Lot ID 22133182-1)

Sampled By : Paramet Sattayakun

Remark :

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

Technical Management

N. Banchookit

Narumon Banchookit
Supervisor
ทะเบียนเลขที่ ๖-323-๖-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ๖-323-๖-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133077
Date Received : Nov 16, 2022
Date Reported : Dec 13, 2022
Report Number : 2479004-2 C1

Page 1 of 1

Sample Number	22133077-1
Sampled Date	Nov 16, 2022 2:45 PM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Nov 17, 2022
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47620	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.3	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	29.1	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	2.0	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 34,750 mg/L (Refer to Lot ID 22133182-1)

Sampled By : Paramet Sattayakun

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5



TESTING
No.0042
Lot ID: 22133078
Date Received : Nov 23, 2022
Date Reported : Dec 13, 2022
Report Number : 2479002-1 C1

Page 1 of 1

Sample Number	22133078-1						
Sampled Date	Nov 23, 2022 11:00 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Nov 23, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	8.1	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature	Degree C	-	-	33.4	≤40	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	-	5	33750	≤39100 (1)	APHA (2017), 2540 C	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 34,100 mg/L (Refer to Lot ID 22133220-1)

Sampled By : Paramet Sattayakun

Remark :

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

Technical Management

N. Banphit

Narumon Banchongkit
Supervisor
หมายเลขโทรศัพท์ 3-323-9-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
หมายเลขโทรศัพท์ 3-323-9-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22133078
Date Received : Nov 23, 2022
Date Reported : Dec 13, 2022
Report Number : 2479002-2 C1

Page 1 of 1

Sample Number	22133078-1						
Sampled Date	Nov 23, 2022 11:00 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Nov 24, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	48430	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.1	No Standard	Based on APHA (2017), 4500-O(C)	Rayong
Salinity	ppt	-	0.1	28.6	No Standard	Based on APHA (2017), 2520 B	Rayong
Turbidity	NTU	-	0.1	0.6	No Standard	Based on APHA (2017), 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 34,100 mg/L (Refer to Lot ID 22133220-1)

Sampled By : Paramet Sattayakun

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5



TESTING
No.0042
Lot ID: 22133079
Date Received : Nov 30, 2022
Date Reported : Dec 13, 2022
Report Number : 2478999-1 C1

Page 1 of 1

Sample Number	22133079-1
Sampled Date	Nov 30, 2022 11:15 AM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Nov 30, 2022
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C *		-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature	Degree C	-	-	34.5	≤40	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	-	5	31150	≤35300 (1)	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 30,300 mg/L (Refer to Lot ID 22133221-1)

Sampled By : Paramet Sattayakun

Remark :

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

Technical Management

N. Banchookit

Narumon Banchookit
Supervisor
ทะเบียนเลขที่ ว-323-ว-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phrakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133079
Date Received : Nov 30, 2022
Date Reported : Dec 13, 2022
Report Number : 2478999-2 C1

Page 1 of 1

Sample Number	22133079-1
Sampled Date	Nov 30, 2022 11:15 AM
Sample Description	Wastewater
Location	Collected discharge point
Date Analysis Commenced	Dec 01, 2022
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45640	No Standard	Based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.3	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
Salinity	ppt	-	0.1	28.1	No Standard	Based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Turbidity	NTU	-	0.1	2.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 30,300 mg/L (Refer to Lot ID 22133221-1)

Sampled By : Paramet Sattayakun

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phrakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5



TESTING
No.0042

Lot ID: 22140918
Date Received : Dec 07, 2022
Date Reported : Jan 03, 2023
Report Number : 2496457-1 C1

Page 1 of 1

Sample Number	22140918-1						
Sampled Date	Dec 07, 2022 10:45 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Dec 07, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C *	-	-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.8	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	-	5	29900	≤35150 (1)	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 30,150 mg/L (Refer to Lot ID 22145970-1)

Sampled By : Chainusorn Lertnanthakunchai

Remark :

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

Technical Management

N. Banchongkit

Narumon Banchongkit
Supervisor
หมายเลข 7-323-9-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
หมายเลข 7-323-9-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22140918

Date Received : Dec 07, 2022
Date Reported : Jan 03, 2023
Report Number : 2496457-2 C1

Page 1 of 1

Sample Number	22140918-1						
Sampled Date	Dec 07, 2022 10:45 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Dec 08, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46920	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
Salinity	ppt	-	0.1	28.6	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Turbidity	NTU	-	0.1	3.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 30,150 mg/L (Refer to Lot ID 22145970-1)

Sampled By : Chainusorn Lertnanthakunchai

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5



TESTING
No.0042
Lot ID: 22145645
Date Received : Dec 14, 2022
Date Reported : Jan 03, 2023
Report Number : 2508732-1 C1

Page 1 of 1

Sample Number	22145645-1						
Sampled Date	Dec 14, 2022 12:52 PM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Dec 14, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C *	-	-	-	8.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	32.8	≤40	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	-	5	32700	≤37700 (1)	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,700 mg/L (Refer to Lot ID 22146037-1)

Sampled By : Paramet Sattayakun

Remark :

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

Technical Management

N. Banichongkit

Narumon Banichongkit
Supervisor
โทรศัพท์ ๖-323-๙-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
โทรศัพท์ ๖-323-๙-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22145645
Date Received : Dec 14, 2022
Date Reported : Jan 03, 2023
Report Number : 2508732-2 C1

Page 1 of 1

Sample Number	22145645-1						
Sampled Date	Dec 14, 2022 12:52 PM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Dec 15, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	49240	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
Salinity	ppt	-	0.1	27.9	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Turbidity	NTU	-	0.1	3.9	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,700 mg/L (Refer to Lot ID 22146037-1)

Sampled By : Paramet Sattayakun

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5



TESTING
No.0042
Lot ID: 22145647
Date Received : Dec 21, 2022
Date Reported : Jan 03, 2023
Report Number : 2508739-1 C1

Page 1 of 1

Sample Number	22145647-1						
Sampled Date	Dec 21, 2022 10:35 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Dec 21, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C *	-	-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature	Degree C	-	-	30.8	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C *	mg/L	-	5	33740	≤37800 (1)	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,800 mg/L (Refer to Lot ID 22146004-1)

Sampled By : Chainusorn Lertnanthakunchai

Remark :

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

Technical Management

N. Banphit

Narumon Banchongkit
Supervisor
หมายเลขโทรศัพท์ ๖-323-๙-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
หมายเลขโทรศัพท์ ๖-323-๙-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22145647

Date Received : Dec 21, 2022
Date Reported : Jan 03, 2023
Report Number : 2508739-2 C1

Page 1 of 1

Sample Number	22145647-1						
Sampled Date	Dec 21, 2022 10:35 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Dec 22, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45980	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
Salinity	ppt	-	0.1	28.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Turbidity	NTU	-	0.1	4.7	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,800 mg/L (Refer to Lot ID 22146004-1)

Sampled By : Chainusorn Lertnanthakunchai

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5



TESTING
No.0042
Lot ID: 22145647
Date Received : Dec 21, 2022
Date Reported : Jan 03, 2023
Report Number : 2508739-1 C1(1)

Page 1 of 1

Sample Number	22145647-1						
Sampled Date	Dec 21, 2022 10:35 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Dec 21, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

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

Sampled By : Chainusorn Lertnanthakunchai

Remark :

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

Technical Management

N. Banchongkit

Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-ก-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5



TESTING
No.0042
Lot ID: 22145648
Date Received : Dec 28, 2022
Date Reported : Jan 04, 2023
Report Number : 2508747-1 C1

Page 1 of 1

Sample Number	22145648-1						
Sampled Date	Dec 28, 2022 10:10 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Dec 29, 2022						
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C *		-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature	Degree C	-	-	29.7	≤40	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33450	≤ 37550 (1)	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,550 mg/L (Refer to Lot ID 22146038-1)

Sampled By : Chainusorn Lertnanthakunchai

Remark :

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

Technical Management

N. Banchongkit

Narumon Banchongkit
Supervisor
ทะเบียนเลขที่ ว-323-ก-9445

Approved by

D. Changchon

Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ก-9442

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22145648
Date Received : Dec 28, 2022
Date Reported : Jan 04, 2023
Report Number : 2508747-2 C1

Page 1 of 1

Sample Number	22145648-1						
Sampled Date	Dec 28, 2022 10:10 AM						
Sample Description	Wastewater						
Location	Collected discharge point						
Date Analysis Commenced	Dec 29, 2022						
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47110	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	8.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
Salinity	ppt	-	0.1	29.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Turbidity	NTU	-	0.1	2.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

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

(1) Total Dissolved Solids when discharged to receiving water having TDS > 3,000 mg/L, TDS in the to-be-discharged wastewater can exceed the TDS already found in the receiving water by not higher than 5,000 mg/L.

Note : Total Dissolved Solids of receiving water is 32,550 mg/L (Refer to Lot ID 22146038-1)

Sampled By : Chainusorn Lertnanthakunchai

Remark :

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

Approved by

N. Banchongkit

Narumon Banchongkit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

S281-111/ EMAIL

ภาคผนวก ค-5

ใบรายงานผลการติดตามตรวจสอบคุณภาพน้ำทะเลชายฝั่ง



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2283138
Date Received : Jul 06, 2022
Date Reported : Jul 15, 2022
Report Number : 2366472-1

Page 1 of 7

Sample Number	2283138-1						
Sampled Date	Jul 06, 2022 11:55 AM						
Sample Description	Sea Water						
Location	สถานี 1 : บริเวณใกล้จุดสูบน้ำทะเล						
Date Analysis Commenced	Jul 06, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	48030	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.1	>4	Based on APHA (2017), 4500-C(C)	Rayong
pH at 25 degree C	-	-	-	8.1	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	35.0	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	32.7	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33950	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	11	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	0.9	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	7.1	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Bangkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

15027-210 ENG

RIGHT SOLUTIONS. RIGHT PARTNER

3 (Pages), AL (L), pt (2 APP)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2283138
Date Received : Jul 06, 2022
Date Reported : Jul 15, 2022
Report Number : 2366472-1

Page 2 of 7

Page 2 of 11

Sample Number	2283138-2						
Sampled Date	Jul 06, 2022 10:45 AM						
Sample Description	Sea Water						
Location	สาย 6 E : บริเวณใกล้จุดสูบน้ำทะเล						
Date Analysis Commenced	Jul 06, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47660	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	4.1	>4	Based on APHA (2017), 4500-C(C)	Rayong
pH at 25 degree C	-	-	-	7.6	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	34.9	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	33.3	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32850	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	19	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	0.8	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	11.4	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Bangkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

15027-210 ENG

RIGHT SOLUTIONS. RIGHT PARTNER

3 (Pages), AL (L), pt (2 APP)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2283138
Date Received : Jul 06, 2022
Date Reported : Jul 15, 2022
Report Number : 2366472-1

Page 3 of 7

Page 3 of 3

Sample Number	2283138-3						
Sampled Date	Jul 06, 2022 11:15 AM						
Sample Description	Sea Water						
Location	สาย 6 A : บริเวณใกล้จุดสูบน้ำทะเล 500 เมตร						
Date Analysis Commenced	Jul 06, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47270	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	4.2	>4	Based on APHA (2017), 4500-C(C)	Rayong
pH at 25 degree C	-	-	-	7.9	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	34.0	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	32.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	34150	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	12	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	0.9	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	5.5	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Bangkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

15027-210 ENG

RIGHT SOLUTIONS. RIGHT PARTNER

3 (Pages), AL (L), pt (2 APP)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2283138
Date Received : Jul 06, 2022
Date Reported : Jul 15, 2022
Report Number : 2366472-1

Page 4 of 7

Page 4 of 7

Sample Number	2283138-4						
Sampled Date	Jul 06, 2022 10:55 AM						
Sample Description	Sea Water						
Location	สาย 6 D : บริเวณใกล้จุดสูบน้ำทะเล 500 เมตร						
Date Analysis Commenced	Jul 06, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47470	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	4.2	>4	Based on APHA (2017), 4500-C(C)	Rayong
pH at 25 degree C	-	-	-	7.5	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	33.8	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	32.8	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	35100	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	17	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	0.8	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	8.1	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Bangkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

15027-210 ENG

RIGHT SOLUTIONS. RIGHT PARTNER

3 (Pages), AL (L), pt (2 APP)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2283138
Date Received : Jul 06, 2022
Date Reported : Jul 15, 2022
Report Number : 2366472-1

Page 5 of 7

Sample Number	2283138-5						
Sampled Date	Jul 06, 2022 10:15 AM						
Sample Description	Sea Water						
Location	สถานี : สถานีวิทยุกระจายเสียง 500 เมตร						
Date Analysis Commenced	Jul 06, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47740	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.3	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	34.2	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	33.2	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33450	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	31	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	0.9	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	10.4	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

This above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of the report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banthongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

15157-21/ENGL

S (Paramet, AL, GL, RT) (2-10PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2283138
Date Received : Jul 06, 2022
Date Reported : Jul 15, 2022
Report Number : 2366472-1

Page 6 of 7

Sample Number	2283138-6						
Sampled Date	Jul 06, 2022 11:40 AM						
Sample Description	Sea Water						
Location	สถานี B : สถานีวิทยุกระจายเสียง 1,000 เมตร						
Date Analysis Commenced	Jul 06, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47610	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.8	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.6	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	34.2	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	33.2	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33000	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	11	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	7.5	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

This above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of the report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banthongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

15157-21/ENGL

S (Paramet, AL, GL, RT) (2-10PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2283138
Date Received : Jul 06, 2022
Date Reported : Jul 15, 2022
Report Number : 2366472-1

Page 7 of 7

Sample Number	2283138-7						
Sampled Date	Jul 06, 2022 9:55 AM						
Sample Description	Sea Water						
Location	สถานี C : สถานีวิทยุกระจายเสียง 1,000 เมตร						
Date Analysis Commenced	Jul 06, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46910	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.4	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	33.4	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	32.4	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32150	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	14	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	11.0	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

This above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of the report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banthongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com

15157-21/ENGL

RIGHT SOLUTIONS RIGHT PARTNER

S (Paramet, AL, GL, RT) (2-10PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2293889
Date Received : Aug 03, 2022
Date Reported : Aug 16, 2022
Report Number : 2390581-1

Page 1 of 7

Sample Number	2293889-1						
Sampled Date	Aug 03, 2022 11:40 AM						
Sample Description	Sea Water						
Location	สถานี I : สถานีวิทยุกระจายเสียง 1,000 เมตร						
Date Analysis Commenced	Aug 03, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	44820	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.3	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.9	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	27.6	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.5	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32450	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	12	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.2	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	9.4	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

This above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of the report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banthongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com

15157-21/ENGL

RIGHT SOLUTIONS RIGHT PARTNER

S (Paramet, AL, GL, RT) (2-10PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2293889
Date Received : Aug 03, 2022
Date Reported : Aug 18, 2022
Report Number : 2390581-1

Page 2 of 7

Sample Number	2293889-2						
Sampled Date	Aug 03, 2022 12:08 PM						
Sample Description	Sea Water						
Location	สถานี E : บริเวณใกล้เขื่อนระบายน้ำท้าย						
Date Analysis Commenced	Aug 03, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	44280	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.5	>4	Based on APHA (2017), 4500-OC(C)	Rayong
pH at 25 degree C	-	-	-	7.4	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	27.5	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	32.8	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30550	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	13	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.1	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	10.4	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Mennam Khu A Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 (Report) AL GL (ref 10-2046)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2293889
Date Received : Aug 03, 2022
Date Reported : Aug 18, 2022
Report Number : 2390581-1

Page 4 of 7

Sample Number	2293889-4						
Sampled Date	Aug 03, 2022 12:04 PM						
Sample Description	Sea Water						
Location	สถานี D : บริเวณเขื่อนระบายน้ำ 500 เมตร						
Date Analysis Commenced	Aug 03, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BO ₅ (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	44230	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.4	>4	Based on APHA (2017), 4500-OC(C)	Rayong
pH at 25 degree C	-	-	-	7.4	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	27.4	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	32.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	31000	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	14	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.1	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	11.6	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Mennam Khu A Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 (Report) AL GL (ref 10-2046)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2293889
Date Received : Aug 03, 2022
Date Reported : Aug 18, 2022
Report Number : 2390581-1

Page 2 of 7

Page 3 of 4

Sample Number	2293889-3						
Sampled Date	Aug 03, 2022 12:00 PM						
Sample Description	Sea Water						
Location	สถานี A : บริเวณเขื่อนระบายน้ำ 500 เมตร						
Date Analysis Commenced	Aug 03, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	43550	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.3	>4	Based on APHA (2017), 4500-OC(C)	Rayong
pH at 25 degree C	-	-	-	7.7	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	27.0	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.9	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30850	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	14	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.2	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	12.8	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Mennam Khu A Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 (Report) AL GL (ref 10-2046)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2293889
Date Received : Aug 03, 2022
Date Reported : Aug 18, 2022
Report Number : 2390581-1

Page 3 of 7

Page 5 of 7

Sample Number	2293889-5						
Sampled Date	Aug 03, 2022 12:16 PM						
Sample Description	Sea Water						
Location	สถานี O : บริเวณเขื่อนระบายน้ำ 500 เมตร						
Date Analysis Commenced	Aug 03, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	40400	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.6	>4	Based on APHA (2017), 4500-OC(C)	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	24.7	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	29.1	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	27650	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	19	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.1	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	16.7	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Mennam Khu A Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 (Report) AL GL (ref 10-2046)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2293889
Date Received : Aug 03, 2022
Date Reported : Aug 18, 2022
Report Number : 2390581-1

Sample Number	2293889-4						
Sampled Date	Aug 03, 2022 11:56 AM						
Sample Description	Sea Water						
Location	สถานี B : สถานีจ่ายน้ำประปาหลัง 1,000 เมตร						
Date Analysis Commenced	Aug 03, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	43980	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.2	>4	Based on APHA (2017), 4500-Cl(C)	Rayong
pH at 25 degree C	-	-	-	7.7	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	27.5	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.7	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	31100	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	13	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.2	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	12.1	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banomyit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand / PHONE +66 0 3304 8555 / FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

1937-321 EMAIL

5 Watanyu, M1, CL, RT (32-26AM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2293889
Date Received : Aug 03, 2022
Date Reported : Aug 18, 2022
Report Number : 2390581-1

Sample Number	2293889-7						
Sample Date	Aug 03, 2022 12:26 PM						
Sample Description	Sea Water						
Location	สถานี C : อ่าวบ้านกรวดระยะทางวัด 1,000 เมตร						
Date Analysis Commenced	Aug 03, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	43400	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.7	>4	Based on APHA (2017), 4500-Cl(C)	Rayong
pH at 25 degree C	-	-	-	8.1	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	26.4	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	29.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	28950	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	17	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.1	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	18.2	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banomyit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand / PHONE +66 0 3304 8555 / FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

1937-321 EMAIL

5 Watanyu, M1, CL, RT (32-26AM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102489
Date Received : Sep 09, 2022
Date Reported : Sep 19, 2022
Report Number : 2409324-1 C2

Sample Number	22102489-1							Page 1 of 7
Sample Date	Sep 09, 2022 10:28 AM							
Sample Description	Sea Water							
Location	สถานี E บริเวณโรงกลั่นปิโตรเลียม							
Date Analysis Commenced	Sep 09, 2022							
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)							
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location	
Water Testing								
Conductivity at 25 Degree C	micromhos/cm	-	0.5	48260	No Standard	Based on APHA (2017), 2510 B	Rayong	
Dissolved Oxygen	mg/L	-	0.1	5.5	>4	Based on APHA (2017), 4500-O(C)	Rayong	
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong	
Salinity	ppt	-	0.1	28.9	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong	
Temperature	Degree C	-	-	32.4	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong	
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33750	No Standard	APHA (2017), 2540 C	Rayong	
Transparency	m	-	-	2.1	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong	
Turbidity	NTU	-	0.1	1.9	No Standard	Based on APHA (2017), 2130 B	Rayong	

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banomyit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand / PHONE +66 0 3304 8555 / FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

1937-321 EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102489
Date Received : Sep 09, 2022
Date Reported : Sep 19, 2022
Report Number : 2409324-1 C2

Sample Number	22102489-2						
Sampled Date	Sep 09, 2022 10:01 AM						
Sample Description	Sea Water						
Location	สถานี E บริเวณโรงกลั่นปิโตรเลียม						
Date Analysis Commenced	Sep 09, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47810	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.8	>4	Based on APHA (2017), 4500-Cl(C)	Rayong
pH at 25 degree C	-	-	-	7.2	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.9	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	33.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33250	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.3	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	6.4	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banomyit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand / PHONE +66 0 3304 8555 / FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

1937-321 EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102489
Date Received : Sep 09, 2022
Date Reported : Sep 19, 2022
Report Number : 2409324-1 C2

Page 3 of 7

Sample Number	22102489-3						
Sampled Date	Sep 09, 2022 10:09 AM						
Sample Description	Sea Water						
Location	สถานี A อุปกรณ์การทดสอบน้ำลึก 500 เมตร						
Date Analysis Commenced	Sep 09, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47870	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	4.2	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.3	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.1	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	33.4	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33350	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.1	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	4.2	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed (tested sample(s)) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoykit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556

LIFE SCIENCE

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

1301-111 0900



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102489
Date Received : Sep 09, 2022
Date Reported : Sep 19, 2022
Report Number : 2409324-1 C2

Page 5 of 7

Page 5 of 8

Sample Number	22102489-5						
Sampled Date	Sep 09, 2022 9:52 AM						
Sample Description	Sea Water						
Location	สถานี O อุปกรณ์การทดสอบน้ำลึก 500 เมตร						
Date Analysis Commenced	Sep 09, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	~	0.5	45260	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	~	0.1	4.6	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C		~	~	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	~	0.1	27.9	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	~	~	31.0	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	~	5	31500	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	~	~	1.4	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	~	0.1	3.2	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed (tested sample(s)) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoykit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556

LIFE SCIENCE

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

1301-111 0900



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102489
Date Received : Sep 09, 2022
Date Reported : Sep 19, 2022
Report Number : 2409324-1 C2

Page 4 of 7

Page 6 of 8

Sample Number	22102489-4						
Sampled Date	Sep 09, 2022 10:05 AM						
Sample Description	Sea Water						
Location	สถานี D อุปกรณ์การทดสอบน้ำลึก 500 เมตร						
Date Analysis Commenced	Sep 09, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47680	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	4.1	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.3	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.2	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	33.2	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32450	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.2	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	5.2	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed (tested sample(s)) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoykit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556

LIFE SCIENCE

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

1301-111 0900



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102489
Date Received : Sep 09, 2022
Date Reported : Sep 19, 2022
Report Number : 2409324-1 C2

Page 6 of 7

Page 6 of 7

Sample Number	22102489-6						
Sampled Date	Sep 09, 2022 10:15 AM						
Sample Description	Sea Water						
Location	สถานี B อุปกรณ์การทดสอบน้ำลึก 1,000 เมตร						
Date Analysis Commenced	Sep 09, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47610	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	4.4	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.7	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.0	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	32.2	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33150	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.4	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	3.4	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed (tested sample(s)) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoykit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556

LIFE SCIENCE

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

1301-111 0900



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102489
Date Received : Sep 09, 2022
Date Reported : Sep 19, 2022
Report Number : 2409324-1 C2

Page 7 of 7

Sample Number	22102489-7						
Sampled Date	Sep 09, 2022 9:42 AM						
Sample Description	Sea Water						
Location	สถานี C อ่าวไทยท่าอุตสาหกรรมอ่าวไทย 1,000 เมตร						
Date Analysis Commenced	Sep 09, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46470	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	4.8	>4	Based on APHA (2017), 4500-C(C)	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.4	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.3	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	31450	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.1	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	7.0	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

Approved by

N. Banchoit

Narumon Banchoitkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand : PHONE +66 0 3304 8555 : FAX +66 0 3304 8556

Life Sciences
www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNERS

01521-01248



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22107401
Date Received : Sep 14, 2022
Date Reported : Nov 28, 2022
Report Number : 2447108-1 C1

Page 1 of 14

Sample Number	22107401-1						
Sampled Date	Sep 14, 2022 10:22 AM						
Sample Description	Sea Water						
Location	ท่าเรืออุตสาหกรรมอ่าวไทย						
Date Analysis Commenced	Sep 14, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	48040	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.0	>4	Based on APHA (2017), 4500-C(C)	Rayong
Petroleum Hydrocarbon	ug/L	0.015	0.05	0.12	≤5	Pre-Concentration, Fluorescence Spectrophotometric Method (IQUINESCO, 1984), Pre-Concentration, Fluorescence Spectrophotometric Method (IQUINESCO, 1984)	Bangkok
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	30.1	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Sulfate	mg/L	0.6	2	2594	No Standard	Based on APHA (2017), 4500-SO4(E)	Rayong
Temperature	Degree C	-	-	30.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	34000	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	<2	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	2.2	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.1	No Standard	Based on APHA (2017), 2130 B	Rayong

Approved by

Siriluk P.

Siriluk Puengpang
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand : PHONE +66 0 3304 8555 : FAX +66 0 3304 8556

Life Sciences
www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNERS

01521-01248



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22107401
Date Received : Sep 14, 2022
Date Reported : Nov 28, 2022
Report Number : 2447108-1 C1

Page 2 of 14

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Note : This Analysis test report is reissued to supersede report No.2443585-1, Date Reported : Sep 24, 2022 due to revise analytical information.
Sampled By : Paramet Sattayakun, Thanasoun Namakunna

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

Approved by

Siriluk P.

Siriluk Puengpang
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand : PHONE +66 0 3304 8555 : FAX +66 0 3304 8556

Life Sciences
www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNERS

01521-01248



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22107401
Date Received : Sep 14, 2022
Date Reported : Nov 28, 2022
Report Number : 2447108-1 C1

Page 3 of 14

Sample Number	22107401-2						
Sampled Date	Sep 14, 2022 11:22 AM						
Sample Description	Sea Water						
Location	บริเวณเขตชุมชนปากคลองระบองเพชร						
Date Analysis Commenced	Sep 14, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	<40	No Standard	APHA (2017), 5220 C	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47810	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.9	>4	Based on APHA (2017), 4500-C(C)	Rayong
Oil & Grease	mg/L	-	3	<3	No Standard	Based on APHA (2017), 5520 B	Rayong
Petroleum Hydrocarbon	ug/L	0.015	0.05	0.22	≤5	Pre-Concentration, Fluorescence Spectrophotometric Method (IQU/UNESCO, 1984), Pre-Concentration, Fluorescence Spectrophotometric Method (IQU/UNESCO, 1984)	Bangkok
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	30.0	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Sulfate	mg/L	0.6	2	2804	No Standard	Based on APHA (2017), 4500-SO4(E)	Rayong
Temperature	Degree C	-	-	32.5	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	34100	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	7	No Standard	APHA (2017), 2540 D	Rayong

Approved by

Siriluk P.

Siriluk Puengpang
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand : PHONE +66 0 3304 8555 : FAX +66 0 3304 8556

Life Sciences
www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNERS

01521-01248



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22107401
Date Received : Sep 14, 2022
Date Reported : Nov 28, 2022
Report Number : 2447109-1 CI

Page 4 of 14

Sample Number	22107401-2					
Sampled Date	Sep 14, 2022 11:22 AM					
Sample Description	Sea Water					
Location	แหล่งประมงชายฝั่งคลองโคกขาม					
Date Analysis Commenced	Sep 14, 2022					
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)					
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method
Water Testing						
Transparency	m	-	-	1.8	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)
Turbidity	NTU	-	0.1	4.4	No Standard	Based on APHA (2017), 2130 B

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Note : This Analysis test report is reissued to supersede report No.2443586-1, Date Reported : Sep 24, 2022 due to revise analytical information.

Sampled By : Paramet Sattayakun , Thanassou Namakunna

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

Approved by

Siriluk P.
Siriluk Puengpang
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERS

10/17-21/2018



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22107401
Date Received : Sep 14, 2022
Date Reported : Nov 28, 2022
Report Number : 2447110-1 CI

Page 6 of 14

Sample Number	22107401-2					
Sampled Date	Sep 14, 2022 11:22 AM					
Sample Description	Sea Water					
Location	แหล่งประมงชายฝั่งคลองโคกขาม					
Date Analysis Commenced	Sep 14, 2022					
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)					
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47700	No Standard	Based on APHA (2017), 2510 B
Dissolved Oxygen	mg/L	-	0.1	5.7	>4	Based on APHA (2017), 4500-O(C)
Petroleum Hydrocarbon	ug/L	0.015	0.05	0.05	≤5	Pre-Concentration, Fluorescence Spectrophotometric Method (IOC/UNESCO, 1984)
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)
Salinity	ppt	-	0.1	29.9	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B
Temperature	Degree C	-	-	31.7	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33750	No Standard	APHA (2017), 2540 C
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	3	No Standard	APHA (2017), 2540 D
Transparency	m	-	-	2.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)
Turbidity	NTU	-	0.1	3.4	No Standard	Based on APHA (2017), 2130 B

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Approved by

Siriluk P.
Siriluk Puengpang
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERS

10/17-21/2018



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22107401
Date Received : Sep 14, 2022
Date Reported : Nov 28, 2022
Report Number : 2447110-1 CI

Page 5 of 14

Sample Number	22107401-3					
Sampled Date	Sep 14, 2022 11:11 AM					
Sample Description	Sea Water					
Location	แหล่งประมงชายฝั่งคลองโคกขาม					
Date Analysis Commenced	Sep 14, 2022					
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)					
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47700	No Standard	Based on APHA (2017), 2510 B
Dissolved Oxygen	mg/L	-	0.1	5.7	>4	Based on APHA (2017), 4500-O(C)
Petroleum Hydrocarbon	ug/L	0.015	0.05	0.05	≤5	Pre-Concentration, Fluorescence Spectrophotometric Method (IOC/UNESCO, 1984)
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)
Salinity	ppt	-	0.1	29.9	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B
Temperature	Degree C	-	-	31.7	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33750	No Standard	APHA (2017), 2540 C
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	3	No Standard	APHA (2017), 2540 D
Transparency	m	-	-	2.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)
Turbidity	NTU	-	0.1	3.4	No Standard	Based on APHA (2017), 2130 B

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Approved by

Siriluk P.
Siriluk Puengpang
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERS

10/17-21/2018



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22107401
Date Received : Sep 14, 2022
Date Reported : Nov 28, 2022
Report Number : 2447111-1 CI

Page 7 of 14

Sample Number	22107401-4					
Sampled Date	Sep 14, 2022 11:16 AM					
Sample Description	Sea Water					
Location	แหล่งประมงชายฝั่งคลองโคกขาม					
Date Analysis Commenced	Sep 14, 2022					
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)					
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47860	No Standard	Based on APHA (2017), 2510 B
Dissolved Oxygen	mg/L	-	0.1	5.6	>4	Based on APHA (2017), 4500-O(C)
Petroleum Hydrocarbon	ug/L	0.015	0.05	0.09	≤5	Pre-Concentration, Fluorescence Spectrophotometric Method (IOC/UNESCO, 1984)
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)
Salinity	ppt	-	0.1	29.8	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B
Temperature	Degree C	-	-	33.0	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	34050	No Standard	APHA (2017), 2540 C
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	4	No Standard	APHA (2017), 2540 D
Transparency	m	-	-	2.6	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)
Turbidity	NTU	-	0.1	3.4	No Standard	Based on APHA (2017), 2130 B

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Approved by

Siriluk P.
Siriluk Puengpang
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERS

10/17-21/2018



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22107401
Date Received : Sep 14, 2022
Date Reported : Nov 28, 2022
Report Number : 2447112-1 CI

Page 9 of 14

Note : This Analysis test report is reissued to supersede report No.2443588-1, Date Reported : Sep 24, 2022 due to revise analytical information.
Sampled By : Paramet Sattayakun, Thanassou Namakunna

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22107401
Date Received : Sep 14, 2022
Date Reported : Nov 28, 2022
Report Number : 2447112-1 CI

Page 9 of 14

Sample Number	22107401-5						
Sampled Date	Sep 14, 2022 11:37 AM						
Sample Description	Sea Water						
Location	แหล่งเก็บน้ำจืดจากทะเลสาบที่ 5 ของโครงการโรงงานอุตสาหกรรม 500 เมตร						
Date Analysis Commenced	Sep 14, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	44470	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.2	>4	Based on APHA (2017), 4500-Cl(C)	Rayong
Petroleum Hydrocarbon	ug/L	0.015	0.05	0.21	≤5	Pre-Concentration, Fluorescence Spectrophotometric Method (EPA/USEPA, 1994)	Bangkok
						Pre-Concentration, Fluorescence Spectrophotometric Method (EPA/USEPA, 1994)	
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	27.3	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.9	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30150	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	6	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.2	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	5.5	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Siriluk P.
Siriluk Puengpang
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A, Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNERS

10137-01 09A8

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Siriluk P.
Siriluk Puengpang
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A, Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNERS

10137-01 09A8



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22107401
Date Received : Sep 14, 2022
Date Reported : Nov 28, 2022
Report Number : 2447112-1 CI

Page 10 of 14

Note : This Analysis test report is reissued to supersede report No.2443589-1, Date Reported : Sep 24, 2022 due to revise analytical information.
Sampled By : Paramet Sattayakun, Thanassou Namakunna

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22107401
Date Received : Sep 14, 2022
Date Reported : Nov 28, 2022
Report Number : 2447112-1 CI

Page 11 of 14

Sample Number	22107401-6						
Sampled Date	Sep 14, 2022 10:38 AM						
Sample Description	Sea Water						
Location	แหล่งเก็บน้ำจืดจากทะเลสาบที่ 5 ของโครงการโรงงานอุตสาหกรรม 1,000 เมตร จุดที่ 1						
Date Analysis Commenced	Sep 14, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	48030	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.8	>4	Based on APHA (2017), 4500-Cl(C)	Rayong
Petroleum Hydrocarbon	ug/L	0.015	0.05	0.05	≤5	Pre-Concentration, Fluorescence Spectrophotometric Method (EPA/USEPA, 1994)	Bangkok
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Pre-Concentration, Fluorescence Spectrophotometric Method (EPA/USEPA, 1994)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	29.8	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.5	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	23450	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	9	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	2.5	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.4	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Siriluk P.
Siriluk Puengpang
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A, Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNERS

10137-01 09A8

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Siriluk P.
Siriluk Puengpang
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A, Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNERS

10137-01 09A8



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22107401
Date Received : Sep 14, 2022
Date Reported : Nov 28, 2022
Report Number : 2447114-1 CI

Page 12 of 14

Note : This Analysis test report is reissued to supersede report No.2443590-1, Date Reported : Sep 24, 2022 due to revise analytical information.
Sampled By : Paramet Sattayakun, Thanasoun Namakunna

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22107401
Date Received : Sep 14, 2022
Date Reported : Nov 28, 2022
Report Number : 2447114-1 CI

Page 13 of 14

Sample Number : 22107401-7
Sampled Date : Sep 14, 2022 11:52 AM
Sample Description : Sea Water
Location : แหล่งน้ำทะเลสาบอุตสาหกรรมโรงกลั่นปิโตรเลียมท่ามาบัต 1,000 เมตร จุดที่ 2
Date Analysis Commenced : Sep 14, 2022
Condition of Sample : Contained in one BOD bottle, four glass vials, two amber glass bottles and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	microhm/cm	-	0.5	46330	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.0	>4	Based on APHA (2017), 4500-O(C)	Rayong
Petroleum Hydrocarbon	ug/L	0.015	0.05	0.05	≤5	Pre-Concentration, Fluorescence Spectrophotometric Method (EPA-821-R-03-01)	Bangkok
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(P)	Rayong
Salinity	ppt	-	0.1	28.7	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	32.2	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32600	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	14	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.2	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	5.9	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Siriluk P.
Siriluk Puengpang
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand / PHONE +66 0 3304 8555 / FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERS

10117-21 DMS

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Siriluk P.
Siriluk Puengpang
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand / PHONE +66 0 3304 8555 / FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERS

10117-21 DMS



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22107401
Date Received : Sep 14, 2022
Date Reported : Nov 28, 2022
Report Number : 2447114-1 CI

Page 14 of 14

Note : This Analysis test report is reissued to supersede report No.2443591-1, Date Reported : Sep 24, 2022 due to revise analytical information.
Sampled By : Paramet Sattayakun, Thanasoun Namakunna

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location: Glow Phase5

Lot ID: 22102490
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 2449802-2

Page 1 of 1

Sample Number : 22102490-1
Sampled Date : Sep 21, 2022 9:56 AM
Sample Description : Sea Water
Location : แหล่งน้ำทะเลสาบอุตสาหกรรมโรงกลั่นปิโตรเลียมท่ามาบัต 1,000 เมตร จุดที่ 2
Date Analysis Commenced : Sep 21, 2022
Condition of Sample : Contained in one BOD bottle, four glass vials, two amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	microhm/cm	-	0.5	48360	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.1	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.9	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	30.2	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32750	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	0.9	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Siriluk P.
Siriluk Puengpang
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand / PHONE +66 0 3304 8555 / FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERS

10117-21 DMS

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banchohkit
Narumon Banchohkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand / PHONE +66 0 3304 8555 / FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERS

10117-21 DMS

3-000001-01 (0.0001)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102490
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 2449802-3

Page 1 of 1

Sample Number	22102490-1						
Sampled Date	Sep 21, 2022 9:56 AM						
Sample Description	Sea Water						
Location	สถานี E บริเวณใกล้จุดเขื่อนป่าสักชลสิทธิ์						
Date Analysis Commenced	Sep 21, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	<2	No Standard	APHA (2017), 2540 D	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102490
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 2449803-2

Page 1 of 1

Sample Number	22102490-2						
Sampled Date	Sep 21, 2022 10:48 AM						
Sample Description	Sea Water						
Location	สถานี E บริเวณใกล้เขตรักษาพันธุ์สัตว์ป่า						
Date Analysis Commenced	Sep 21, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, three amber glass bottles and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47150	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	4.4	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.9	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.1	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	32.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	31400	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.4	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.4	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Menam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences
www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER
5 (Reports) All CL (pt) 3 (DPM)

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Menam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences
www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER
5 (Reports) All CL (pt) 3 (DPM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102490
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 2449803-3

Page 1 of 1

Sample Number	22102490-2						
Sample Date	Sep 21, 2022 10:48 AM						
Sample Description	Sea Water						
Location	สถานี E บริเวณใกล้เขตรักษาพันธุ์สัตว์ป่า						
Date Analysis Commenced	Sep 21, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, three amber glass bottles and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	2	No Standard	APHA (2017), 2540 D	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102490
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 2449804-2

Page 1 of 1

Page 1 of 1

Sample Number	22102490-3						
Sampled Date	Sep 21, 2022 10:34 AM						
Sample Description	Sea Water						
Location	สถานี A บริเวณใกล้เขตรักษาพันธุ์สัตว์ป่า 500 เมตร						
Date Analysis Commenced	Sep 21, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46770	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	4.8	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.8	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32950	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.6	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.4	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Menam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences
www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER
5 (Reports) All CL (pt) 3 (DPM)

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Menam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences
www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER
5 (Reports) All CL (pt) 3 (DPM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102490
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 2449804-3

Page 1 of 1

Sample Number	22102490-3						
Sample Date	Sep 21, 2022 10:34 AM						
Sample Description	Sea Water						
Location	สถานี A สถานีตรวจวัดคุณภาพน้ำ 500 เมตร						
Date Analysis Commenced	Sep 21, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-ClF	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	3	No Standard	APHA (2017), 2540 D	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

Approved by

N. Banngnit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences
www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNERSHIP
S (Shrimp), RE (up) (3.00PH)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102490
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 2449805-2

Page 1 of 1

Page 1 of 1

Sample Number	22102490-4						
Sample Date	Sep 21, 2022 10:40 AM						
Sample Description	Sea Water						
Location	สถานี D สถานีตรวจวัดคุณภาพน้ำ 500 เมตร						
Date Analysis Commenced	Sep 21, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46610	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	4.6	>4	Based on APHA (2017), 4500-OC	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.1	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.1	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33300	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.6	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.8	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

Approved by

N. Banngnit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences
www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNERSHIP
S (Shrimp), AL (up) (3.00PH)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102490
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 2449805-3

Page 1 of 1

Sample Number	22102490-4						
Sample Date	Sep 21, 2022 10:40 AM						
Sample Description	Sea Water						
Location	สถานี D สถานีตรวจวัดคุณภาพน้ำ 500 เมตร						
Date Analysis Commenced	Sep 21, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-ClF	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	<2	No Standard	APHA (2017), 2540 D	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

Approved by

N. Banngnit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences
www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNERSHIP
S (Shrimp), AL (up) (3.00PH)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102490
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 2449806-2

Page 1 of 1

Page 1 of 1

Sample Number	22102490-5						
Sampled Date	Sep 21, 2022 11:03 AM						
Sample Description	Sea Water						
Location	สถานี D สถานีตรวจวัดคุณภาพน้ำ 500 เมตร						
Date Analysis Commenced	Sep 21, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46090	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	4.6	>4	Based on APHA (2017), 4500-OC(C)	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.6	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	31100	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	3.7	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

Approved by

N. Banngnit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences
www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNERSHIP
S (Shrimp), AL (up) (3.00PH)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102490
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 2449806-3

Page 1 of 1

Sample Number	22102490-5						
Sampled Date	Sep 21, 2022 11:03 AM						
Sample Description	Sea Water						
Location	สถานี O สถานีประปาภิบาลน้ำดิบ 500 เมตร						
Date Analysis Commenced	Sep 21, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	3	No Standard	APHA (2017), 2540 D	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Paramet Sattayakun

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102490
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 2449807-2

Page 1 of 1

Sample Number	22102490-6						
Sampled Date	Sep 21, 2022 10:15 AM						
Sample Description	Sea Water						
Location	สถานี B สถานีประปาภิบาลน้ำดิบ 1,000 เมตร						
Date Analysis Commenced	Sep 21, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47530	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	4.8	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C		-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.7	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.7	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32750	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.8	Change from natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.2	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without express consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banymit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER
S120111/ENAL S120111/ENAL S120111/ENAL

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without express consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banymit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER
S120111/ENAL S120111/ENAL S120111/ENAL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102490
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 2449807-3

Page 1 of 1

Sample Number	22102490-6						
Sample Date	Sep 21, 2022 10:15 AM						
Sample Description	Sea Water						
Location	สถานี B สถานีประปาภิบาลน้ำดิบ 1,000 เมตร						
Date Analysis Commenced	Sep 21, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	<2	No Standard	APHA (2017), 2540 D	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Paramet Sattayakun

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102490
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 2449808-2

Page 1 of 1

Sample Number	22102490-7						
Sample Date	Sep 21, 2022 11:16 AM						
Sample Description	Sea Water						
Location	สถานี C สถานีประปาภิบาลน้ำดิบ 1,000 เมตร						
Date Analysis Commenced	Sep 21, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and three plastic bottles, sample containers comply to pretreatment + preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46380	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	4.6	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-6.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.8	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.4	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	31450	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.7	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	3.3	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without express consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banymit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER
S120111/ENAL S120111/ENAL S120111/ENAL

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without express consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banymit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER
S120111/ENAL S120111/ENAL S120111/ENAL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, Map Ta Phut Industrial Estate, I-5 Road, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102490
Date Received : Sep 21, 2022
Date Reported : Sep 29, 2022
Report Number : 249808-3

Page 1 of 1

Sample Number	22102490-7						
Sampled Date	Sep 21, 2022 11:16 AM						
Sample Description	Sea Water						
Location	สถานี C อ่าวไทยตอนบนฝั่งตะวันออก 1,000 เมตร						
Date Analysis Commenced	Sep 21, 2022						
Condition of Sample	Contained in one BOD bottle, four glass vials, two amber glass bottles and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	5	No Standard	APHA (2017), 2540 D	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCE www.alsglobal.com
RIGHT SOLUTIONS FIGHT POLLUTION
5 (Pages) AL GL pr (1.00pp)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102491
Date Received : Sep 28, 2022
Date Reported : Oct 07, 2022
Report Number : 2409312-1 C2

Page 2 of 2

Page 2 of 3

Sample Number	22102491-2						
Sampled Date	Sep 28, 2022 10:12 AM						
Sample Description	Sea Water						
Location	สถานี E อ่าวไทยตอนบนฝั่งตะวันออก 500 เมตร						
Date Analysis Commenced	Sep 28, 2022						
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46120	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.0	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.1	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.3	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.0	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30450	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.2	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	4.8	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pathompong Kornswat

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCE www.alsglobal.com
RIGHT SOLUTIONS FIGHT POLLUTION
5 (Pages) AL GL pr (1.00pp)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102491
Date Received : Sep 28, 2022
Date Reported : Oct 07, 2022
Report Number : 2409312-1 C2

Page 1 of 2

Page 1 of 7

Sample Number	22102491-1						
Sampled Date	Sep 28, 2022 9:45 AM						
Sample Description	Sea Water						
Location	สถานี 1 อ่าวไทยตอนบนฝั่งตะวันออก						
Date Analysis Commenced	Sep 28, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47520	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.5	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.4	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.0	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32200	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.7	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	5.2	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pathompong Kornswat

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCE www.alsglobal.com
RIGHT SOLUTIONS FIGHT POLLUTION
5 (Pages) AL GL pr (1.00pp)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22102491
Date Received : Sep 28, 2022
Date Reported : Oct 07, 2022
Report Number : 2409312-1 C2

Page 3 of 2

Page 3 of 7

Sample Number	22102491-3						
Sampled Date	Sep 28, 2022 10:04 AM						
Sample Description	Sea Water						
Location	สถานี A อ่าวไทยตอนบนฝั่งตะวันออก 500 เมตร						
Date Analysis Commenced	Sep 28, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45070	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.7	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	27.1	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	29.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	29550	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.7	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	3.3	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pathompong Kornswat

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCE www.alsglobal.com
RIGHT SOLUTIONS FIGHT POLLUTION
5 (Pages) AL GL pr (1.00pp)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location: Glow Phase5

Lot ID: 22102491
Date Received : Sep 28, 2022
Date Reported : Oct 07, 2022
Report Number : 2409312-1 C2

Page 4 of 7

Sample Number	22102491-4						
Sampled Date	Sep 28, 2022 10:08 AM						
Sample Description	Sea Water						
Location	สถานี B อยู่ห่างจากจุดระวางน้ำลึก 500 เมตร						
Date Analysis Commenced	Sep 28, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	44910	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.4	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	27.6	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.1	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	29200	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.5	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	4.0	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pathompong Kornswat

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

Approved by

N. Banongkit
Narumon Banongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khui A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556



500-110 DPM



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location: Glow Phase5

Lot ID: 22102491
Date Received : Sep 28, 2022
Date Reported : Oct 07, 2022
Report Number : 2409312-1 C2

Page 5 of 7

Sample Number	22102491-5						
Sampled Date	Sep 28, 2022 10:20 AM						
Sample Description	Sea Water						
Location	สถานี D อ่าวไทยจากจุดเขตรักษาพันธุ์ 500 เมตร						
Date Analysis Commenced	Sep 28, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45520	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.2	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.1	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.2	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	29.5	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	28600	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.4	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	4.5	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pathompong Kornswat

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

Approved by

N. Banongkit
Narumon Banongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khui A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556



500-110 DPM



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location: Glow Phase5

Lot ID: 22102491
Date Received : Sep 28, 2022
Date Reported : Oct 07, 2022
Report Number : 2409312-1 C2

Page 6 of 7

Page 6 of 8

Sample Number	22102491-6						
Sample Date	Sep 28, 2022 10:02 AM						
Sample Description	Sea Water						
Location	สถานี B อ่าวไทยตอนในฝั่งตะวันออก 1,000 เมตร						
Date Analysis Commenced	Sep 28, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment – preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45920	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.3	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	27.9	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	29.9	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30550	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.9	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.2	No Standard	Based on APHA (2017), 2130 B	Rayong

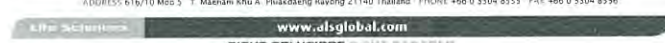
Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pathompong Kornswat

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

Approved by

N. Banongkit
Narumon Banongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khui A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556



500-110 DPM



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location: Glow Phase5

Lot ID: 22102491
Date Received : Sep 28, 2022
Date Reported : Oct 07, 2022
Report Number : 2409312-1 C2

Page 7 of 7

Sample Number	22102491-7						
Sampled Date	Sep 28, 2022 10:26 AM						
Sample Description	Sea Water						
Location	สถานี C อ่าวไทยตอนในฝั่งตะวันออก 1,000 เมตร						
Date Analysis Commenced	Sep 28, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA/USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	43490	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.0	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C		-	-	8.1	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	26.7	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	29.8	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	28500	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	0.5	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	25.0	No Standard	Based on APHA (2017), 2130 B	Rayong

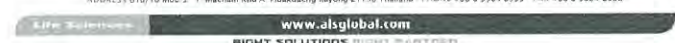
Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pathompong Kornswat

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

Approved by

N. Banongkit
Narumon Banongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khui A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556



500-110 DPM



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22114802
Date Received : Oct 05, 2022
Date Reported : Oct 20, 2022
Report Number : 2436489-1 C2

Page 1 of 2

Sample Number	22114802-1						
Sampled Date	Oct 05, 2022 10:10 AM						
Sample Description	Sea Water						
Location	สถานี E บริเวณโรงกลั่นปิโตรเลียม						
Date Analysis Commenced	Oct 05, 2022						
Condition of Sample	Contained in one BOD bottle and two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47300	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.3	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.9	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	30.8	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	32.1	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	35300	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	3.6	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.1	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pitthaya Thongtaeng

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

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556



1007212 DMSL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22114802
Date Received : Oct 05, 2022
Date Reported : Oct 20, 2022
Report Number : 2436489-1 C2

Page 1 of 2

Sample Number	22114802-3						
Sampled Date	Oct 05, 2022 10:29 AM						
Sample Description	Sea Water						
Location	สถานี A บริเวณโรงกลั่นปิโตรเลียม 500 เมตร						
Date Analysis Commenced	Oct 05, 2022						
Condition of Sample	Contained in one BOD bottle and two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47080	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.9	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.7	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	30.9	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.4	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	35350	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.6	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.8	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pitthaya Thongtaeng

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

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556



1007212 DMSL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22114802
Date Received : Oct 05, 2022
Date Reported : Oct 20, 2022
Report Number : 2436489-1 C2

Page 2 of 2

Sample Number	22114802-2						
Sampled Date	Oct 05, 2022 10:41 AM						
Sample Description	Sea Water						
Location	สถานี E บริเวณโรงกลั่นปิโตรเลียม						
Date Analysis Commenced	Oct 05, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47080	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.8	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.7	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	30.1	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.9	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	35900	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.6	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	0.8	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pitthaya Thongtaeng

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

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556



1007212 DMSL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22114802
Date Received : Oct 05, 2022
Date Reported : Oct 20, 2022
Report Number : 2436489-1 C2

Page 1 of 2

Sample Number	22114802-4						
Sampled Date	Oct 05, 2022 10:35 AM						
Sample Description	Sea Water						
Location	สถานี D บริเวณโรงกลั่นปิโตรเลียม 500 เมตร						
Date Analysis Commenced	Oct 05, 2022						
Condition of Sample	Contained in one BOD bottle and two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47120	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	8.2	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.7	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	30.8	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	34500	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.4	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.2	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pitthaya Thongtaeng

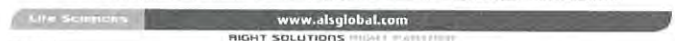
Remark :
LOD : Limit of Detection
"<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556



1007212 DMSL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22114802
Date Received : Oct 05, 2022
Date Reported : Oct 20, 2022
Report Number : 2436489-1 C2

Page 5 of 7

Sample Number	22114802-5						
Sampled Date	Oct 05, 2022 10:55 AM						
Sample Description	Sea Water						
Location	สถานี อ.อ่าวไทยตอนบนระยอง 500 เมตร						
Date Analysis Commenced	Oct 05, 2022						
Condition of Sample	Contained in one BOD bottle and two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46530	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	8.2	>4	Based on APHA (2017), 4500-OC	Rayong
pH at 25 degree C	-	-	-	7.9	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	30.5	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.9	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33950	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.8	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.9	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pitthaya Thongtaeng

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banomyit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556

Life Sciences **www.alsglobal.com**
RIGHT SOLUTIONS RIGHT PARTNER

1517 (U) ENGL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22114802
Date Received : Oct 05, 2022
Date Reported : Oct 20, 2022
Report Number : 2436489-1 C2

Page 6 of 7

Sample Number	22114802-6						
Sampled Date	Oct 05, 2022 10:20 AM						
Sample Description	Sea Water						
Location	สถานี บี อ่าวไทยตอนบนระยอง 1,000 เมตร						
Date Analysis Commenced	Oct 05, 2022						
Condition of Sample	Contained in one BOD bottle and two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46990	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.8	>4	Based on APHA (2017), 4500-OC	Rayong
pH at 25 degree C	-	-	-	7.7	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	30.8	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.5	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	35100	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.4	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.8	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pitthaya Thongtaeng

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banomyit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556

Life Sciences **www.alsglobal.com**
RIGHT SOLUTIONS RIGHT PARTNER

1517 (U) ENGL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22114802
Date Received : Oct 05, 2022
Date Reported : Oct 20, 2022
Report Number : 2436489-1 C2

Page 7 of 7

Sample Number	22114802-7						
Sampled Date	Oct 05, 2022 11:05 AM						
Sample Description	Sea Water						
Location	สถานี อ.อ่าวไทยตอนบนระยอง 1,000 เมตร						
Date Analysis Commenced	Oct 05, 2022						
Condition of Sample	Contained in one BOD bottle and two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46590	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	8.3	>4	Based on APHA (2017), 4500-OC	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.8	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.3	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	35300	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.9	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.3	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pitthaya Thongtaeng

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banomyit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556

Life Sciences **www.alsglobal.com**
RIGHT SOLUTIONS RIGHT PARTNER

1517 (U) ENGL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22114213
Date Received : Oct 12, 2022
Date Reported : Oct 20, 2022
Report Number : 2462238-1

Page 1 of 7

Sample Number	22114213-1						
Sampled Date	Oct 12, 2022 12:20 PM						
Sample Description	Seawater						
Location	ท่าเรืออุตสาหกรรมมาบตาพุด						
Date Analysis Commenced	Oct 12, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	43790	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.6	>4	Based on APHA (2017), 4500-OC	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	27.5	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	33.0	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	29850	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	3.2	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.1	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Tanast Wongasachai

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banomyit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556

Life Sciences **www.alsglobal.com**
RIGHT SOLUTIONS RIGHT PARTNER

1517 (U) ENGL

S:\Report\AL GL 06 (102021)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22114213
Date Received : Oct 12, 2022
Date Reported : Oct 20, 2022
Report Number : 2462238-1

Page 2 of 7

Sample Number	22114213-2						
Sampled Date	Oct 12, 2022 1:55 PM						
Sample Description	Seawater						
Location	บริเวณจุดประจักษ์คลองระยอง						
Date Analysis Commenced	Oct 12, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
COD	mg/L	-	-	<40	No Standard	APHA (2017), 5220 C	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45510	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.5	>4	Based on APHA (2017), 4500-O(C)	Rayong
Oil & Grease	mg/L	-	3	5	No Standard	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C	-	-	-	7.2	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.7	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	33.1	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	31250	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	3	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.9	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	3.4	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Tanasit Wongsachai

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Menam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 (Baeng) AL SL (pt) (4.00%)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22114213
Date Received : Oct 12, 2022
Date Reported : Oct 20, 2022
Report Number : 2462238-1

Page 4 of 7

Sample Number	22114213-4						
Sampled Date	Oct 12, 2022 1:37 PM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำทะเลสาบชายฝั่งของโรงงานไฟฟ้าถ่านหินแบริ่ง 500 เมตร ชุด 2						
Date Analysis Commenced	Oct 12, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45300	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.0	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.5	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.0	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	32.8	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	31200	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.6	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Tanasit Wongsachai

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Menam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 (Baeng) AL SL (pt) (4.00%)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22114213
Date Received : Oct 12, 2022
Date Reported : Oct 20, 2022
Report Number : 2462238-1

Page 3 of 7

Sample Number	22114213-3						
Sampled Date	Oct 12, 2022 1:27 PM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำทะเลสาบชายฝั่งของโรงงานไฟฟ้าถ่านหินแบริ่ง 500 เมตร ชุด 1						
Date Analysis Commenced	Oct 12, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	44950	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.2	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.9	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.1	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	32.9	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30350	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.1	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.6	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Tanasit Wongsachai

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

Approved by

N. Banongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Menam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 (Baeng) AL SL (pt) (4.00%)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22114213
Date Received : Oct 12, 2022
Date Reported : Oct 20, 2022
Report Number : 2462238-1

Page 5 of 7

Sample Number	22114213-5						
Sampled Date	Oct 12, 2022 2:13 PM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำทะเลสาบชายฝั่งของโรงงานไฟฟ้าถ่านหินแบริ่ง 500 เมตร						
Date Analysis Commenced	Oct 12, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	44590	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.0	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	27.5	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	32.7	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30000	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	3.6	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Tanasit Wongsachai

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

Approved by

N. Banongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Menam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 (Baeng) AL SL (pt) (4.00%)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22114213
Date Received : Oct 12, 2022
Date Reported : Oct 20, 2022
Report Number : 2462238-1

Page 6 of 7

Sample Number	22114213-6						
Sampled Date	Oct 12, 2022 1:15 PM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำประปาจากกระบวนการผลิตของโรงกลั่นปิโตรเลียมดิบ 1,000 เมตร จุดที่ 1						
Date Analysis Commenced	Oct 12, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45430	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.1	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.5	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.5	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	32.8	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30650	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.6	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.2	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Tanasit Wongachai

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

The above results are valid only for the analyzed (tested) sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER 5 (Years) AT CL (4.50PH)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22114213
Date Received : Oct 12, 2022
Date Reported : Oct 20, 2022
Report Number : 2462238-1

Page 7 of 7

Sample Number	22114213-7						
Sampled Date	Oct 12, 2022 2:40 PM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำประปาจากกระบวนการผลิตของโรงกลั่นปิโตรเลียมดิบ 1,000 เมตร จุดที่ 2						
Date Analysis Commenced	Oct 12, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	43750	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.2	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	27.5	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.8	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	28500	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.8	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.4	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Tanasit Wongachai

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

The above results are valid only for the analyzed (tested) sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER 5 (Years) AT CL (4.50PH)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22127351
Date Received : Oct 19, 2022
Date Reported : Oct 26, 2022
Report Number : 2466278-1

Page 1 of 7

Sample Number	22127351-1						
Sampled Date	Oct 19, 2022 11:30 AM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำประปาจากกระบวนการผลิตของโรงกลั่นปิโตรเลียมดิบ 1,000 เมตร จุดที่ 1						
Date Analysis Commenced	Oct 19, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47950	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.0	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	<0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	29.2	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.4	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	34300	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	2	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	0.9	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.2	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed (tested) sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER 5 (Years) AT CL (4.50PH)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22127351
Date Received : Oct 19, 2022
Date Reported : Oct 26, 2022
Report Number : 2466278-1

Page 2 of 7

Sample Number	22127351-2						
Sampled Date	Oct 19, 2022 11:00 AM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำประปาจากกระบวนการผลิตของโรงกลั่นปิโตรเลียมดิบ 1,000 เมตร จุดที่ 2						
Date Analysis Commenced	Oct 19, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47420	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.0	>4	Based on APHA (2017), 4500-O(C)	Rayong
Oil & Grease	mg/L	-	3	<3	No Standard	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C	-	-	-	7.8	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	<0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	28.8	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.2	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32800	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	4	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.8	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	6.6	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed (tested) sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER 5 (Years) AT CL (4.50PH)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22127351
Date Received : Oct 19, 2022
Date Reported : Oct 26, 2022
Report Number : 2466278-1

Page 3 of 7

Sample Number	22127351-3						
Sample Date	Oct 19, 2022 10:45 AM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำทะเลหน้าท่าอุตสาหกรรมบริเวณโรงกลั่นปิโตรเลียมของโรงกลั่นปิโตรเลียม 500 เมตร เขต 1						
Date Analysis Commenced	Oct 19, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47420	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.4	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.9	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	29.0	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.2	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33400	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	3	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	2.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.9	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banomyi

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Mueang Khu A. Phakdeeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTS RIGHT TIME

5 (Pages) / At GL (pt 1/3) (PH)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22127351
Date Received : Oct 19, 2022
Date Reported : Oct 26, 2022
Report Number : 2466278-1

Page 5 of 7

Page 5 of 8

Sample Number	22127351-5						
Sample Date	Oct 19, 2022 11:12 AM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำทะเลหน้าท่าอุตสาหกรรมบริเวณโรงกลั่นปิโตรเลียมของโรงกลั่นปิโตรเลียม 500 เมตร						
Date Analysis Commenced	Oct 19, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47250	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.8	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	28.2	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	29.2	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	35300	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	5	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.8	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.8	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banomyi

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Mueang Khu A. Phakdeeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTS RIGHT TIME

5 (Pages) / At GL (pt 1/3) (PH)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22127351
Date Received : Oct 19, 2022
Date Reported : Oct 26, 2022
Report Number : 2466278-1

Page 6 of 7

page 5 of 7

Sample Number	22127351-4						
Sample Date	Oct 19, 2022 10:55 AM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำทะเลหน้าท่าอุตสาหกรรมบริเวณโรงกลั่นปิโตรเลียมของโรงกลั่นปิโตรเลียม 500 เมตร เขต 2						
Date Analysis Commenced	Oct 19, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47500	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.0	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.8	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	29.0	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.9	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	35750	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	3	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	2.3	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.9	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banomyi

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Mueang Khu A. Phakdeeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTS RIGHT TIME

5 (Pages) / At GL (pt 1/3) (PH)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22127351
Date Received : Oct 19, 2022
Date Reported : Oct 26, 2022
Report Number : 2466278-1

Page 2 of 7

Sample Number	22127351-7						
Sampled Date	Oct 19, 2022 11:25 AM						
Sample Description	Seawater						
Location	บริเวณหน้าท่าเทียบเรือท่าอ่าวไทยตอนบนฝั่งตะวันออกใกล้ท่าอ่าวไทยประมาณ 1,000 เมตร รหัส 2						
Date Analysis Commenced	Oct 19, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47170	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.8	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.1	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	28.7	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	28.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	35050	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	<2	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	2.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.8	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banngkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS FIGHTS POLLUTION

5 (Report), All GL up (3.00PM)

1509-12 (ENG)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase 5

Lot ID: 22114214
Date Received : Oct 26, 2022
Date Reported : Nov 02, 2022
Report Number : 2472532-1

Page 1 of 7

Sample Number	22114214-1						
Sampled Date	Oct 26, 2022 9:10 AM						
Sample Description	Seawater						
Location	บริเวณหน้าท่าเทียบเรือท่าอ่าวไทยตอนบนฝั่งตะวันออกใกล้ท่าอ่าวไทย 500 เมตร รหัส 1						
Date Analysis Commenced	Oct 26, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47460	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.2	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.7	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.9	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33400	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	3.2	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	0.6	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pittaya Thongtaeng

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

The above results are valid only for the analyzed sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banngkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS FIGHTS POLLUTION

1509-12 (ENG)

5 (Report), All GL up (3.00PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase 5

Lot ID: 22114214
Date Received : Oct 26, 2022
Date Reported : Nov 02, 2022
Report Number : 2472532-1

Page 2 of 7

Sample Number	22114214-2						
Sample Date	Oct 26, 2022 9:38 AM						
Sample Description	Seawater						
Location	บริเวณหน้าท่าเทียบเรือท่าอ่าวไทยตอนบนฝั่งตะวันออกใกล้ท่าอ่าวไทย 500 เมตร รหัส 1						
Date Analysis Commenced	Oct 26, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
COD	mg/L	-	40	<40	No Standard	APHA (2017), 5220 C	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47410	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.1	>4	Based on APHA (2017), 4500-O(C)	Rayong
Oil & Grease	mg/L	-	3	<3	No Standard	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C		-	-	7.3	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.8	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33700	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	4	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	2.6	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	3.9	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pittaya Thongtaeng

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

The above results are valid only for the analyzed sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banngkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS FIGHTS POLLUTION

5 (Report), All GL up (3.00PM)

1509-12 (ENG)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase 5

Lot ID: 22114214
Date Received : Oct 26, 2022
Date Reported : Nov 02, 2022
Report Number : 2472532-1

Page 3 of 7

Sample Number	22114214-3						
Sampled Date	Oct 26, 2022 9:27 AM						
Sample Description	Seawater						
Location	บริเวณหน้าท่าเทียบเรือท่าอ่าวไทยตอนบนฝั่งตะวันออกใกล้ท่าอ่าวไทย 500 เมตร รหัส 1						
Date Analysis Commenced	Oct 26, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47620	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.2	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.6	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.7	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.1	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33650	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	3.2	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.9	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pittaya Thongtaeng

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

The above results are valid only for the analyzed sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banngkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS FIGHTS POLLUTION

1509-12 (ENG)

5 (Report), All GL up (3.00PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase 5

Lot ID: 22114214
Date Received : Oct 26, 2022
Date Reported : Nov 02, 2022
Report Number : 2472532-1

Page 4 of 7

Sample Number	22114214-4						
Sampled Date	Oct 26, 2022 9:32 AM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำทะเลสาบอุตสาหกรรมของโครงการโรงไฟฟ้าถลุงเหล็ก 500 เมตร จุดที่ 2						
Date Analysis Commenced	Oct 26, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47760	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.1	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.6	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.0	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.4	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33350	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.6	Change from natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.1	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pithaya Thongtaeng

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banngnit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phakdeeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LINE BUSINESS

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 (Works) AT 3L (T 3000)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase 5

Lot ID: 22114214
Date Received : Oct 26, 2022
Date Reported : Nov 02, 2022
Report Number : 2472532-1

Page 6 of 7

Sample Number	22114214-6						
Sampled Date	Oct 26, 2022 9:20 AM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำทะเลสาบอุตสาหกรรมของโครงการโรงไฟฟ้าถลุงเหล็ก 1,000 เมตร จุดที่ 1						
Date Analysis Commenced	Oct 26, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment – preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47790	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.4	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.7	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.4	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.9	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33200	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	3.0	Change from natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.6	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pithaya Thongtaeng

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banngnit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phakdeeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LINE BUSINESS

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 (Works) AT 3L (T 3000)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase 5

Lot ID: 22114214
Date Received : Oct 26, 2022
Date Reported : Nov 02, 2022
Report Number : 2472532-1

Page 5 of 7

Sample Number	22114214-5						
Sampled Date	Oct 26, 2022 9:48 AM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำทะเลสาบอุตสาหกรรมของโครงการโรงไฟฟ้าถลุงเหล็ก 500 เมตร						
Date Analysis Commenced	Oct 26, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47320	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.6	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.4	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.0	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32950	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.3	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.8	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pithaya Thongtaeng

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

Approved by

N. Banngnit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phakdeeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LINE BUSINESS

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 (Works) AT 3L (T 3000)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase 5

Lot ID: 22114214
Date Received : Oct 26, 2022
Date Reported : Nov 02, 2022
Report Number : 2472532-1

Page 7 of 7

Page 2 of 7

Sample Number	22114214-7						
Sample Date	Oct 26, 2022 9:59 AM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำทะเลสาบอุตสาหกรรมของโครงการโรงไฟฟ้าถลุงเหล็ก 1,000 เมตร จุดที่ 2						
Date Analysis Commenced	Oct 26, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47360	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.6	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.7	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32700	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	3.0	Change from natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.3	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pithaya Thongtaeng

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

Approved by

N. Banngnit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phakdeeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LINE BUSINESS

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 (Works) AT 3L (T 3000)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133161
Date Received : Nov 02, 2022
Date Reported : Nov 09, 2022
Report Number : 2479139-1

Page 1 of 1

Sample Number	22133161-1						
Sample Date	Nov 02, 2022 11:25 AM						
Sample Description	Seawater						
Location	บริเวณท่าเทียบเรือท่าเรืออุตสาหกรรม						
Date Analysis Commenced	Nov 02, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	52500	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.6	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.5	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	29.4	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32000	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	1.8	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.3	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Wanlop Hunchinaow

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com
RIGHT SOLUTIONS. FASTER. BETTER. (S) (W) (M) (R) (G) (N) (I) (D) (E) (A) (L)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133171
Date Received : Nov 02, 2022
Date Reported : Nov 09, 2022
Report Number : 2479180-1

Page 1 of 1

Sample Number	22133171-1						
Sampled Date	Nov 02, 2022 10:20 AM						
Sample Description	Seawater						
Location	บริเวณแหล่งท่าเทียบเรืออุตสาหกรรมชายฝั่งตะวันออกใกล้ท่าเรือท่าเรือ 500 เมตร จุด 1						
Date Analysis Commenced	Nov 02, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	51910	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.5	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.2	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.0	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32750	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.3	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Wanlop Hunchinaow

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com
RIGHT SOLUTIONS. FASTER. BETTER. (S) (W) (M) (R) (G) (N) (I) (D) (E) (A) (L)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133172
Date Received : Nov 02, 2022
Date Reported : Nov 09, 2022
Report Number : 2479176-1

Page 1 of 1

Sample Number	22133172-1						
Sampled Date	Nov 02, 2022 10:25 AM						
Sample Description	Seawater						
Location	บริเวณแหล่งท่าเทียบเรืออุตสาหกรรมชายฝั่งตะวันออกใกล้ท่าเรือท่าเรือ 500 เมตร จุดที่ 2						
Date Analysis Commenced	Nov 02, 2022						
Condition of Sample	Contained in three plastic bottles and one BOD bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	52600	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.5	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.9	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.4	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.3	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32000	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.9	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Wanlop Hunchinaow

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com
RIGHT SOLUTIONS. FASTER. BETTER. (S) (W) (M) (R) (G) (N) (I) (D) (E) (A) (L)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133173
Date Received : Nov 02, 2022
Date Reported : Nov 09, 2022
Report Number : 2479175-1

Page 1 of 1

Page 1 of 1

Sample Number	22133173-1						
Sample Date	Nov 02, 2022 10:40 AM						
Sample Description	Seawater						
Location	บริเวณแหล่งท่าเทียบเรืออุตสาหกรรมชายฝั่งตะวันออกใกล้ท่าเรือท่าเรือ 500 เมตร						
Date Analysis Commenced	Nov 02, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	52540	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.7	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.1	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.7	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	29.3	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	31750	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.5	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Wanlop Hunchinaow

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences www.alsglobal.com
RIGHT SOLUTIONS. FASTER. BETTER. (S) (W) (M) (R) (G) (N) (I) (D) (E) (A) (L)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133174
Date Received : Nov 02, 2022
Date Reported : Nov 09, 2022
Report Number : 2479171-1

Sample Number	22133174-1						
Sampled Date	Nov 02, 2022 10:10 AM						
Sample Description	Seawater						
Location	บริเวณหน้าท่าเทียบเรือท่าอุตสาหกรรมปิโตรเคมีของโรงงานปิโตรเคมีและปิโตรเคมี 1,000 เมตร จุดที่ 1						
Date Analysis Commenced	Nov 02, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	52460	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.5	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.9	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.1	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32600	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.2	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.8	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Wanlop Hunchainaw

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banjongkit

Narumon Banjongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 (Pages) All rights reserved



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133175
Date Received : Nov 02, 2022
Date Reported : Nov 09, 2022
Report Number : 2479153-1

Page 3 of 4

Sample Number	22133175-1						
Sampled Date	Nov 02, 2022 11:04 AM						
Sample Description	Seawater						
Location	บริเวณหน้าท่าเทียบเรือท่าอุตสาหกรรมปิโตรเคมีของโรงงานปิโตรเคมีและปิโตรเคมี 1,000 เมตร จุดที่ 2						
Date Analysis Commenced	Nov 02, 2022						
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	52410	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.8	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.0	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	28.9	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32300	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.3	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.0	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Wanlop Hunchainaw

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banjongkit

Narumon Banjongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 (Pages) All rights reserved



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133178
Date Received : Nov 02, 2022
Date Reported : Nov 09, 2022
Report Number : 2479183-1

Sample Number	22133178-1						
Sampled Date	Nov 02, 2022 10:30 AM						
Sample Description	Seawater						
Location	บริเวณหน้าท่าเทียบเรือท่าอุตสาหกรรมปิโตรเคมีของโรงงานปิโตรเคมีและปิโตรเคมี 1,000 เมตร จุดที่ 1						
Date Analysis Commenced	Nov 02, 2022						
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
COD	mg/L	-	40	<40	No Standard	APHA (2017), 5220 C	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	52290	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.7	>4	Based on APHA (2017), 4500-O(C)	Rayong
Oil & Grease	mg/L	-	3	<3	No Standard	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C	-	-	-	8.1	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.8	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	29.8	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32700	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	3.9	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Wanlop Hunchainaw

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banjongkit

Narumon Banjongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 (Pages) All rights reserved



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133211
Date Received : Nov 09, 2022
Date Reported : Nov 15, 2022
Report Number : 2479380-1

Page 1 of 1

Sample Number	22133211-1						
Sampled Date	Nov 09, 2022 11:15 AM						
Sample Description	Seawater						
Location	บริเวณหน้าท่าเทียบเรือท่าอุตสาหกรรมปิโตรเคมีของโรงงานปิโตรเคมีและปิโตรเคมี 1,000 เมตร จุดที่ 1						
Date Analysis Commenced	Nov 09, 2022						
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
COD	mg/L	-	40	<40	No Standard	APHA (2017), 5220 C	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	49420	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.8	>4	Based on APHA (2017), 4500-O(C)	Rayong
Oil & Grease	mg/L	-	3	<3	No Standard	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C	-	-	-	7.8	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.9	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.4	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	34150	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	7	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.9	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	4.7	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Wanlop Hunchainaw

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banjongkit

Narumon Banjongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 (Pages) All rights reserved



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133215
Date Received : Nov 09, 2022
Date Reported : Nov 12, 2022
Report Number : 2479237-1

Page 1 of 1

Sample Number	22133215-1						
Sampled Date	Nov 09, 2022 12:10 PM						
Sample Description	Seawater						
Location	บริเวณหน้าท่าเทียบเรือท่าเรือขนส่งสินค้าบริเวณโครงการพัฒนาพื้นที่ 500 เมตร						
Date Analysis Commenced	Nov 09, 2022						
Condition of Sample	Contained in one plastic bottle and one BOD bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	49610	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.9	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	30.0	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	29.7	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33450	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.8	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Wanlop Hunchanaow

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company
www.alsglobal.com

15596-21/ENGL

RIGHT SOLUTIONS RIGHT PARTNER

15596-21/ENGL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133225
Date Received : Nov 09, 2022
Date Reported : Nov 12, 2022
Report Number : 2479266-1

Page 1 of 1

Sample Number	22133225-1						
Sampled Date	Nov 09, 2022 11:20 AM						
Sample Description	Seawater						
Location	บริเวณหน้าท่าเทียบเรือท่าเรือขนส่งสินค้าบริเวณโครงการพัฒนาพื้นที่ 500 เมตร						
Date Analysis Commenced	Nov 09, 2022						
Condition of Sample	Contained in one plastic bottle and one BOD bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	49190	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.9	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.1	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.8	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	29.2	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33650	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.5	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Wanlop Hunchanaow

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company
www.alsglobal.com

15596-21/ENGL

RIGHT SOLUTIONS RIGHT PARTNER

15596-21/ENGL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133226
Date Received : Nov 09, 2022
Date Reported : Nov 12, 2022
Report Number : 2479258-1

Page 1 of 1

Page 2 of 2

Sample Number	22133226-1						
Sampled Date	Nov 09, 2022 11:03 AM						
Sample Description	Seawater						
Location	บริเวณหน้าท่าเทียบเรือท่าเรือขนส่งสินค้าบริเวณโครงการพัฒนาพื้นที่ 500 เมตร จุดที่ 2						
Date Analysis Commenced	Nov 09, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	49150	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.3	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.9	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.8	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	29.7	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	35900	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	5.4	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Wanlop Hunchanaow

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company
www.alsglobal.com

15596-21/ENGL

RIGHT SOLUTIONS RIGHT PARTNER

15596-21/ENGL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133227
Date Received : Nov 09, 2022
Date Reported : Nov 12, 2022
Report Number : 2479246-1

Page 1 of 1

Sample Number	22133227-1						
Sampled Date	Nov 09, 2022 11:12 AM						
Sample Description	Seawater						
Location	บริเวณหน้าท่าเทียบเรือท่าเรือขนส่งสินค้าบริเวณโครงการพัฒนาพื้นที่ 500 เมตร จุดที่ 1						
Date Analysis Commenced	Nov 09, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	49850	No Standard	Bi-sed on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.6	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.8	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.4	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32100	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	2.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.5	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Wanlop Hunchanaow

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company
www.alsglobal.com

15596-21/ENGL

RIGHT SOLUTIONS RIGHT PARTNER

15596-21/ENGL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133185
Date Received : Nov 16, 2022
Date Reported : Nov 23, 2022
Report Number : 2479215-1

Page 1 of 1

Sample Number	22133185-1						
Sampled Date	Nov 16, 2022 2:02 PM						
Sample Description	Seawater						
Location	บริเวณแผนผังท่าเทียบเรืออุตสาหกรรมท่าเรือโรงกลั่นปิโตรเลียมภาคตะวันออก 500 เมตร จุดที่ 2						
Date Analysis Commenced	Nov 16, 2022						
Condition of Sample	Contained in three plastic bottles and one BOD bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47420	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.6	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.9	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	29.2	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.8	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33850	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	6	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.5	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	4.3	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Pathompong Kornsaivat

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

Approved by

N. Bangmit

Narumon Banchongkit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS

5 Reports, All (LOR) (4.33PM)

15594-21 (ENGL)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133186
Date Received : Nov 16, 2022
Date Reported : Nov 23, 2022
Report Number : 2479208-1

Page 1 of 1

Sample Number	22133186-1						
Sampled Date	Nov 16, 2022 2:18 PM						
Sample Description	Seawater						
Location	บริเวณแผนผังท่าเทียบเรืออุตสาหกรรมท่าเรือโรงกลั่นปิโตรเลียมภาคตะวันออก 500 เมตร						
Date Analysis Commenced	Nov 16, 2022						
Condition of Sample	Contained in three plastic bottles and one BOD bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46980	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	8.7	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.1	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	29.0	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33850	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	3	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.5	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.4	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Pathompong Kornsaivat

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

Approved by

N. Bangmit

Narumon Banchongkit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS

5 Reports, All (LOR) (4.33PM)

15594-21 (ENGL)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133187
Date Received : Nov 16, 2022
Date Reported : Nov 23, 2022
Report Number : 2479197-1

Page 1 of 1

Page 1 of 1

Sample Number	22133187-1						
Sampled Date	Nov 16, 2022 1:53 PM						
Sample Description	Seawater						
Location	บริเวณแผนผังท่าเทียบเรืออุตสาหกรรมท่าเรือโรงกลั่นปิโตรเลียมภาคตะวันออก 1,000 เมตร จุดที่ 1						
Date Analysis Commenced	Nov 16, 2022						
Condition of Sample	Contained in three plastic bottles and one BOD bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47660	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.5	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	7.9	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	29.4	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.1	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	35000	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	5	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.4	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	3.3	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Pathompong Kornsaivat

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

Approved by

N. Bangmit

Narumon Banchongkit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS

5 Reports, All (LOR) (4.33PM)

15594-21 (ENGL)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133188
Date Received : Nov 16, 2022
Date Reported : Nov 23, 2022
Report Number : 2479194-1

Page 1 of 1

Sample Number	22133188-1						
Sampled Date	Nov 16, 2022 2:27 PM						
Sample Description	Seawater						
Location	บริเวณแผนผังท่าเทียบเรืออุตสาหกรรมท่าเรือโรงกลั่นปิโตรเลียมภาคตะวันออก 1,000 เมตร จุดที่ 2						
Date Analysis Commenced	Nov 16, 2022						
Condition of Sample	Contained in three plastic bottles and one BOD bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46940	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	8.8	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.1	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	29.0	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.2	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33850	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	<2	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.4	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.4	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Pathompong Kornsaivat

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

Approved by

N. Bangmit

Narumon Banchongkit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS

5 Reports, All (LOR) (4.33PM)

15594-21 (ENGL)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133206
Date Received : Nov 16, 2022
Date Reported : Nov 23, 2022
Report Number : 2479223-1

Page 1 of 2

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
COD	mg/L	-	40	<40		APHA (2017), 5220 C	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47460	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.3	>4	Based on APHA (2017), 4500-O(C)	Rayong
Oil & Grease	mg/L	-	3	<3	No Standard	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C	-	-	-	7.6	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	0.06	≤0.01	Based on APHA (2017), 4500-Cl(F)	Rayong
Salinity	ppt	-	0.1	29.1	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	31.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	34350	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	5	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	0.9	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	4.6	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pathompong Kornasawat

Remark :

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banongkit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS

5 (Hours), All (24/7) (4 Hours)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133220
Date Received : Nov 23, 2022
Date Reported : Nov 26, 2022
Report Number : 2479245-1

Page 1 of 1

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	48100	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.7	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.6	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.4	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	34100	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	4.7	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.0	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banongkit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS

5 (Hours), All (24/7) (4 Hours)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133206
Date Received : Nov 16, 2022
Date Reported : Nov 23, 2022
Report Number : 2479223-1

Page 2 of 2

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banongkit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS

5 (Hours), All (24/7) (4 Hours)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133228
Date Received : Nov 23, 2022
Date Reported : Nov 26, 2022
Report Number : 2479254-1

Page 1 of 1

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	48210	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.7	>4	Based on APHA (2017), 4500-O(C)	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	29.1	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.9	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33550	No Standard	APHA (2017), 2540 C	Rayong
Transparency	m	-	-	5.0	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.1	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banongkit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS

5 (Hours), All (24/7) (4 Hours)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133221
Date Received : Nov 23, 2022
Date Reported : Nov 30, 2022
Report Number : 2479386-1

Page 1 of 1

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	APHA (2017), 5210 B	Rayong
COD	mg/L	-	40	<40	No Standard	APHA (2017), 5220 C	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	48380	No Standard	Based on APHA (2017), 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.8	>4	Based on APHA (2017), 4500-O(C)	Rayong
Oil & Grease	mg/L	-	3	<3	No Standard	Based on APHA (2017), 5520 B	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Based on APHA (2017), 4500-H (B)	Rayong
Salinity	ppt	-	0.1	28.7	Change from lower salinity not more than 10%	Based on APHA (2017), 2520 B	Rayong
Temperature	Degree C	-	-	30.7	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33800	No Standard	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	<2	No Standard	APHA (2017), 2540 D	Rayong
Transparency	m	-	-	1.8	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.4	No Standard	Based on APHA (2017), 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reprinted except in full.

Approved by

Dej Changchon
Dej Changchon
Senior Manager

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences RIGHT SOLUTIONS www.alsglobal.com
1000-11 (ENG) 3 (Words) AL (LOR) 1 (24HR)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133221
Date Received : Nov 30, 2022
Date Reported : Dec 03, 2022
Report Number : 2479243-1

Page 2 of 2

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45100	No Standard	Based on Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.8	>4	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.1	7.0-8.5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Salinity	ppt	-	0.1	26.2	Change from lower salinity not more than 10%	Based on Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	32.0	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30000	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.8	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.1	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reprinted except in full.

Approved by

N. Banchongkit
Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences RIGHT SOLUTIONS www.alsglobal.com
1000-11 (ENG) 3 (Words) AL (LOR) 1 (24HR)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133221
Date Received : Nov 30, 2022
Date Reported : Dec 03, 2022
Report Number : 2479243-1

Page 1 of 2

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45850	No Standard	Based on Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.0	>4	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Salinity	ppt	-	0.1	27.6	Change from lower salinity not more than 10%	Based on Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	31.0	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30300	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	2.6	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.1	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reprinted except in full.

Approved by

N. Banchongkit
Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences RIGHT SOLUTIONS www.alsglobal.com
1000-11 (ENG) 3 (Words) AL (LOR) 1 (24HR)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133229
Date Received : Nov 30, 2022
Date Reported : Dec 03, 2022
Report Number : 2479251-1

Page 1 of 2

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45100	No Standard	Based on Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.8	>4	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.1	7.0-8.5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Salinity	ppt	-	0.1	26.2	Change from lower salinity not more than 10%	Based on Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	32.0	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30000	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.8	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.1	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reprinted except in full.

Approved by

N. Banchongkit
Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences RIGHT SOLUTIONS www.alsglobal.com
1000-11 (ENG) 3 (Words) AL (LOR) 1 (24HR)

Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133229
Date Received : Nov 30, 2022
Date Reported : Dec 03, 2022
Report Number : 2479251-1

Remark :

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

Page 2 of 2



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133234
Date Received : Nov 30, 2022
Date Reported : Dec 03, 2022
Report Number : 2479262-1

Page 1 of 2

Sample Number	22133234-1						
Sampled Date	Nov 30, 2022 11:20 AM						
Sample Description	Seawater						
Location	ท่าเรือแหลมโพธิ์จังหวัดระยองท่าเรือประมงตราสารพิษทางทิศตะวันตกฝั่ง 500 เมตร รหัส 2						
Date Analysis Commenced	Nov 30, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45460	No Standard	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.5	>4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C		-	-	7.9	7.0-8.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	27.4	Change from lower salinity not more than 10%	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	31.8	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2530 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	31300	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.7	Change from Natural condition not more than 10% of the lowest transparency	ND508 (1994)	Rayong
Turbidity	NTU	-	0.1	2.9	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

Approved by _____

N. Bangert

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A Phrakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
AIS LABORATORY GROUP (THAILAND) CO., LTD. An AIS Limited Company

Keywords: child sexual abuse; disclosure; self-blame



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location: Glow Phase5

Lot ID: 22133234
Date Received : Nov 30, 2022
Date Reported : Dec 03, 2022
Report Number : 2479262-1

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

Page 2 of 2

Page 1 of 1

Sample Number	22133251-1						
Sample Date	Nov 30, 2022 11:40 AM						
Sample Description	Seawater						
Location	ท่าเรือหน้าด่านจังหวัดสงขลาท่าเรือหน้าด่านโดยทางไปท่าเรือหลัก 500 เมตร						
Date Analysis Commenced	Nov 30, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA/USEPA)						
Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conduct vity at 25 Degree C	micromhos/cm	-	0.5	44780	No Standard	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.7	>4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	26.4	Change from lower salinity not more than 10%	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	32.0	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30300	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	nt	-	-	1.6	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.7	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2100 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattavakun

Approved by _____

N. B. Singh

Narumon Banchongkit
Eunpoo

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556

10734-111 EN41



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-DM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133251
Date Received : Nov 30, 2022
Date Reported : Dec 03, 2022
Report Number : 2479267-1

Page 1 of 1

Page 1 of 1

Sample Number	22133251-1						
Sample Date	Nov 30, 2022 11:40 AM						
Sample Description	Seawater						
Location	ท่าเรือหน้าด่านจังหวัดสงขลาท่าเรือหน้าด่านโครงการพัฒนาพื้นที่ 500 ไร่						
Date Analysis Commenced	Nov 30, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conduct vity at 25 Degree C	micromhos/cm	-	0.5	44780	No Standard	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.7	>4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	26.4	Change from lower salinity not more than 10%	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	32.0	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30300	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	nt	-	-	1.6	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.7	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2150 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattavakun

Approved by _____

N. Bangui

Narumon Banchongk
Supervisor

ADDRESS 616/10 Moo 3 T. Maenam Khu A Phatthadaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
 RESEARCH LABORATORY GROUP (THAI) AND CO., LTD. An AIS Limited Company

19558-21/ 8/14/20

5. Reports, AB 62, p. 5 (5/2/94)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133251
Date Received : Nov 30, 2022
Date Reported : Dec 03, 2022
Report Number : 2479267-1

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

Page 2 of 2



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133259
Date Received : Nov 30, 2022
Date Reported : Dec 03, 2022
Report Number : 2479309-1

Page 9 of 10

Sample Number	22133259-1						
Sampled Date	Nov 30, 2022 11:00 AM						
Sample Description	Seawater						
Location	บริเวณแหล่งพักพิงนกชายทะเลหน้าห้องโถงทางใต้ของอาคารโรงกลั่นปิโตรเลียม 1,000 เมตร จุดที่ 1						
Date Analysis Commenced	Nov 30, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45330	No Standard	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.2	>4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-D (C)	Rayong
pH at 25 degree C	-	-	-	7.9	7.0-8.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	27.0	Change from lower salinity not more than 10‰	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	33.1	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	29250	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.7	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	2.5	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERSHIP

5 (Pages) At 0.0pt (5.27mm)

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERSHIP

5 (Pages) At 0.0pt (5.27mm)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133259
Date Received : Nov 30, 2022
Date Reported : Dec 03, 2022
Report Number : 2479309-1

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

Page 2 of 2



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133257
Date Received : Nov 30, 2022
Date Reported : Dec 03, 2022
Report Number : 2479309-1

Page 1 of 2

Sample Number	22133257-1						
Sampled Date	Nov 30, 2022 12:10 PM						
Sample Description	Seawater						
Location	บริเวณแหล่งพักพิงนกชายทะเลหน้าห้องโถงทางใต้ของอาคารโรงกลั่นปิโตรเลียม 1,000 เมตร จุดที่ 2						
Date Analysis Commenced	Nov 30, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45340	No Standard	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.5	>4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.1	7.0-8.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	27.3	Change from lower salinity not more than 10‰	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	32.3	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	29050	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	2.4	Change from Natural condition not more than 10% of the lowest transparency	NIOSH (1994)	Rayong
Turbidity	NTU	-	0.1	1.6	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERSHIP

5 (Pages) At 0.0pt (5.27mm)

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERSHIP

5 (Pages) At 0.0pt (5.27mm)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133257
Date Received : Nov 30, 2022
Date Reported : Dec 03, 2022
Report Number : 2479300-1

Page 2 of 2

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133292
Date Received : Nov 30, 2022
Date Reported : Dec 12, 2022
Report Number : 2479381-1

Page 1 of 2

Sample Number	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
22133292-1							
Sampled Date	Nov 30, 2022 11:30 AM						
Sample Description	Seawater						
Location	บริเวณจุดรับน้ำเข้านอกโรงกลั่น						
Date Analysis Commenced	Dec 07, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	-	-	<40	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 C	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45050	No Standard	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.8	>4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
Oil & Grease	mg/L	-	3	3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C		-	-	8.1	7.0-8.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	27.1	Change from lower salinity not more than 10%	Based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	32.4	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	31600	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phakdaeng Rayong 21140 Thailand. PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

1558-221 ENGL RIGHT SOLUTIONS PHOTOCOPY PROHIBITED 5 (Volume), All rights reserved (S.27PM)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phakdaeng Rayong 21140 Thailand. PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

1558-221 ENGL RIGHT SOLUTIONS PHOTOCOPY PROHIBITED 5 (Volume), All rights reserved (S.27PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133292
Date Received : Nov 30, 2022
Date Reported : Dec 12, 2022
Report Number : 2479381-1

Page 2 of 2

Sample Number	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
22133292-1							
Sampled Date	Nov 30, 2022 11:30 AM						
Sample Description	Seawater						
Location	บริเวณจุดรับน้ำเข้านอกโรงกลั่น						
Date Analysis Commenced	Nov 30, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	<2	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong
Transparency	m	-	-	1.9	Change from natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	1.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22145970
Date Received : Dec 07, 2022
Date Reported : Dec 14, 2022
Report Number : 2509724-1

Page 1 of 2

Sample Number	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
22145970-1							
Sampled Date	Dec 07, 2022 2:02 PM						
Sample Description	Seawater						
Location	บริเวณจุดรับน้ำเข้านอกโรงกลั่น						
Date Analysis Commenced	Dec 07, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47000	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.9	>4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C		-	-	8.0	7.0-8.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	28.6	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	30.6	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30150	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.5	Change from natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	2.3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun รหัสเอกสาร : 3-323-4-9476

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phakdaeng Rayong 21140 Thailand. PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

1558-221 ENGL RIGHT SOLUTIONS PHOTOCOPY PROHIBITED 5 (Volume), All rights reserved (S.27PM)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phakdaeng Rayong 21140 Thailand. PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

1558-221 ENGL RIGHT SOLUTIONS PHOTOCOPY PROHIBITED 5 (Volume), All rights reserved (S.27PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22145980
Date Received : Dec 07, 2022
Date Reported : Dec 14, 2022
Report Number : 2509733-1

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

Page 2 of 2



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22145983
Date Received : Dec 07, 2022
Date Reported : Dec 14, 2022
Report Number : 2509736-1

Page 1 of 2

Sample Number	22145983-1						
Sampled Date	Dec 07, 2022 2:28 PM						
Sample Description	Seawater						
Location	บริเวณแหล่งท่าเทียบเรือของโรงงานอุตสาหกรรม 500 เมตร จุด 2						
Date Analysis Commenced	Dec 07, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47050	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.9	>4	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	7.9	7.0-8.5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	28.4	Change from lower salinity not more than 10‰	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	31.0	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30750	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.4	Change from Natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	3.1	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun วิจัยและทดสอบ >323-4-9476

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory: ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakding Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS FOR YOUR BUSINESS

S (Secret), M (Conf), P (Public)

13094-23 (ENGL)

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory: ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakding Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS FOR YOUR BUSINESS

S (Secret), M (Conf), P (Public)

13094-23 (ENGL)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22145983
Date Received : Dec 07, 2022
Date Reported : Dec 14, 2022
Report Number : 2509736-1

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

Page 2 of 2



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22145987
Date Received : Dec 07, 2022
Date Reported : Dec 14, 2022
Report Number : 2509741-1

Page 1 of 2

Page 1 of 1

Sample Number	22145987-1						
Sample Date	Dec 07, 2022 2:44 PM						
Sample Description	Seawater						
Location	บริเวณแหล่งท่าเทียบเรือของโรงงานอุตสาหกรรม 500 เมตร						
Date Analysis Commenced	Dec 07, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46620	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.3	>4	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	28.2	Change from lower salinity not more than 10‰	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	30.8	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30900	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.0	Change from Natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	5.7	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun วิจัยและทดสอบ >323-4-9476

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory: ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakding Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS FOR YOUR BUSINESS

S (Secret), M (Conf), P (Public)

13094-23 (ENGL)

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory: ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakding Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS FOR YOUR BUSINESS

S (Secret), M (Conf), P (Public)

13094-23 (ENGL)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22145987
Date Received : Dec 07, 2022
Date Reported : Dec 14, 2022
Report Number : 2509741-1

Page 2 of 2

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22145996
Date Received : Dec 07, 2022
Date Reported : Dec 14, 2022
Report Number : 2509749-1

Page 1 of 2

Sample Number	22145996-1						
Sample Date	Dec 07, 2022 2:18 PM						
Sample Description	Seawater						
Location	บริเวณท่าเทียบเรืออุตสาหกรรมชายฝั่งตะวันออกในภาคใต้ของประเทศไทย 1,000 เมตร ชุด 1						
Date Analysis Commenced	Dec 07, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46960	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.7	>4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	7.7	7.0-8.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	28.0	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	32.1	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30600	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.5	Change from Natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	2.7	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun พารเมตสรฐกุล >323-4-9476

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banymit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phukdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences **www.alsglobal.com**
RIGHT SOLUTIONS FIGHT POLLUTION 5 (Shore), AL GL, pt (4.8PH)

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banymit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phukdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences **www.alsglobal.com**
RIGHT SOLUTIONS FIGHT POLLUTION 5 (Shore), AL GL, pt (4.8PH)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22145996
Date Received : Dec 07, 2022
Date Reported : Dec 14, 2022
Report Number : 2509749-1

Page 2 of 2

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146002
Date Received : Dec 07, 2022
Date Reported : Dec 14, 2022
Report Number : 2509751-1

Page 1 of 2

Page 1 of 2

Sample Number	22146002-1						
Sample Date	Dec 07, 2022 2:54 PM						
Sample Description	Seawater						
Location	บริเวณแหล่งท่าเทียบเรืออุตสาหกรรมชายฝั่งตะวันออกในภาคใต้ของประเทศไทย 1,000 เมตร ชุด 2						
Date Analysis Commenced	Dec 07, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46710	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.6	>4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	28.0	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	30.9	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	30700	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.7	Change from Natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	2.3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun พารเมตสรฐกุล >323-4-9476

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banymit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phukdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences **www.alsglobal.com**
RIGHT SOLUTIONS FIGHT POLLUTION 5 (Shore), AL GL, pt (4.8PH)

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banymit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phukdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences **www.alsglobal.com**
RIGHT SOLUTIONS FIGHT POLLUTION 5 (Shore), AL GL, pt (4.8PH)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146002
Date Received : Dec 07, 2022
Date Reported : Dec 14, 2022
Report Number : 2509751-1

Page 2 of 2

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146037
Date Received : Dec 14, 2022
Date Reported : Dec 19, 2022
Report Number : 2509819-1

Page 1 of 2

Sample Number	22146037-1						
Sampled Date	Dec 14, 2022 10:30 AM						
Sample Description	Seawater						
Location	ท่าเรืออุตสาหกรรมมาบตาพุด						
Date Analysis Commenced	Dec 14, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	49200	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.6	>4	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	28.5	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	29.2	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32700	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.5	Change from Natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	1.6	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun วิจัยและวิจัย >323-a-9476

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banchohit

Narumon Banchohit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banchohit

Narumon Banchohit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146037
Date Received : Dec 14, 2022
Date Reported : Dec 19, 2022
Report Number : 2509819-1

Page 2 of 2

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146041
Date Received : Dec 14, 2022
Date Reported : Dec 22, 2022
Report Number : 2509823-1

Page 1 of 2

Page 1 of 2

Sample Number	22146041-1						
Sampled Date	Dec 14, 2022 10:15 AM						
Sample Description	Seawater						
Location	ท่าเรืออุตสาหกรรมมาบตาพุด						
Date Analysis Commenced	Dec 14, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	40	<40	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5220 C	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	49130	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	4.8	>4	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
Oil & Grease	mg/L	-	3	<3	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	28.5	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	30.0	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33100	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 C	Rayong

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banchohit

Narumon Banchohit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banchohit

Narumon Banchohit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146048
Date Received : Dec 14, 2022
Date Reported : Dec 19, 2022
Report Number : 2509838-1

Page 2 of 2

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146051
Date Received : Dec 14, 2022
Date Reported : Dec 19, 2022
Report Number : 2509845-1

Page 1 of 2

Sample Number	22146051-1						
Sample Date	Dec 14, 2022 10:45 AM						
Sample Description	Seawater						
Location	บริเวณท่อส่งน้ำจากโรงกลั่นปิโตรเลียมในท่าเรืออุตสาหกรรม 500 เมตร						
Date Analysis Commenced	Dec 14, 2022						
Condition of Sample	Contained in one BOD bottle and one amber glass bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	49290	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.7	>4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.1	7.0-8.5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	28.4	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	29.2	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32800	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.0	Change from Natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	2.2	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun วิจัยสมุทรศาสตร์ 323-9-9476

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banthit

Narumon Banthongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A, Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences Division RIGHT SOLUTIONS FOR THE FUTURE 5 Vajiravithaya Rd. (S. 229th St.) 10500-24 (PHN)

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banthit

Narumon Banthongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A, Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences Division RIGHT SOLUTIONS FOR THE FUTURE 5 Vajiravithaya Rd. (S. 229th St.) 10500-24 (PHN)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146051
Date Received : Dec 14, 2022
Date Reported : Dec 19, 2022
Report Number : 2509845-1

Page 2 of 2

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146054
Date Received : Dec 14, 2022
Date Reported : Dec 19, 2022
Report Number : 2509843-1

Page 1 of 2

Sample Number	22146054-1						
Sample Date	Dec 14, 2022 9:35 AM						
Sample Description	Seawater						
Location	บริเวณท่อส่งน้ำจากโรงกลั่นปิโตรเลียมในท่าเรืออุตสาหกรรม 1,000 เมตร จุดที่ 1						
Date Analysis Commenced	Dec 14, 2022						
Condition of Sample	Contained in one BOD bottle and one amber glass bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	49480	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	5.0	>4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	28.2	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	29.3	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32650	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.6	Change from Natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	1.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun วิจัยสมุทรศาสตร์ 323-9-9476

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banthit

Narumon Banthongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A, Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences Division RIGHT SOLUTIONS FOR THE FUTURE 5 Vajiravithaya Rd. (S. 229th St.) 10500-24 (PHN)

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banthit

Narumon Banthongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A, Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences Division RIGHT SOLUTIONS FOR THE FUTURE 5 Vajiravithaya Rd. (S. 229th St.) 10500-24 (PHN)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146054
Date Received : Dec 14, 2022
Date Reported : Dec 19, 2022
Report Number : 2509843-1

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

Page 2 of 2



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146058
Date Received : Dec 14, 2022
Date Reported : Dec 19, 2022
Report Number : 2509853-1

Page 1 of 2

Page 1 of 2

Sample Number	22146058-1						
Sample Date	Dec 14, 2022 10:50 AM						
Sample Description	Seawater						
Location	บริเวณหน้าท่าเรือพลังงานแสงอาทิตย์ของโรงงานไฟฟ้าถ่านหินถลุงเหล็ก 1,000 เมตร ชุด 2						
Date Analysis Commenced	Dec 14, 2022						
Condition of Sample	Contained in one BOD bottle and one amber glass bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	49270	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	4.9	>4	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	28.1	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	29.0	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33600	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.7	Change from Natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	3.0	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun โทร 09-0985373-323-9-9476

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banchongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE Sciences www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERS

5 (Specs), All GL (pt 1 & 20pt)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banchongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE Sciences www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERS

5 (Specs), All GL (pt 1 & 20pt)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146058
Date Received : Dec 14, 2022
Date Reported : Dec 19, 2022
Report Number : 2509853-1

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

Page 2 of 2



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146004
Date Received : Dec 21, 2022
Date Reported : Dec 28, 2022
Report Number : 2509754-1

Page 1 of 2

Page 1 of 2

Sample Number	22146004-1						
Sample Date	Dec 21, 2022 1:40 PM						
Sample Description	Seawater						
Location	บริเวณหน้าท่าเรือพลังงานแสงอาทิตย์ของโรงงานไฟฟ้าถ่านหินถลุงเหล็ก						
Date Analysis Commenced	Dec 21, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45940	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.6	>4	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.2	7.0-8.5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Salinity	ppt	-	0.1	29.4	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	28.4	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32800	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	<2	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 D	Rayong

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banchongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE Sciences www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERS

5 (Specs), All GL (pt 1 & 20pt)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

N. Banchongkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE Sciences www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNERS

5 (Specs), All GL (pt 1 & 20pt)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146004
Date Received : Dec 21, 2022
Date Reported : Dec 28, 2022
Report Number : 2509754-1

Page 2 of 2

Sample Number	22146004-1						
Sampled Date	Dec 21, 2022 1:40 PM						
Sample Description	Seawater						
Location	บริเวณจุดสูบน้ำของโรงกลั่น						
Date Analysis Commenced	Dec 21, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Transparency	m	-	-	2.0	Change from Natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	3.2	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampling By : Paramet Sattayakun โทร 09-9476-3233-9476

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

Approved by

N. Banmyit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS

S (Reports), AL GL rpt (21/02/2021)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146006
Date Received : Dec 21, 2022
Date Reported : Dec 28, 2022
Report Number : 2509756-1

Page 1 of 2

Sample Number	22146006-1						
Sampled Date	Dec 21, 2022 2:25 PM						
Sample Description	Seawater						
Location	บริเวณเขตน่านน้ำของโรงกลั่น						
Date Analysis Commenced	Dec 21, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	-	40	<40	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5220 C	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45910	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.5	>4	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
Oil & Grease	mg/L	-	3	<3	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C	-	-	-	7.8	7.0-8.5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	<0.01	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CI (F)	Rayong
Salinity	ppt	-	0.1	29.6	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	29.4	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong

The above results are valid only for the analyzed (tested) sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banmyit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS

S (Reports), AL GL rpt (21/02/2021)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146006
Date Received : Dec 21, 2022
Date Reported : Dec 28, 2022
Report Number : 2509756-1

Page 2 of 2

Sample Number	22146006-1						
Sampled Date	Dec 21, 2022 2:25 PM						
Sample Description	Seawater						
Location	บริเวณเขตน่านน้ำของโรงกลั่น						
Date Analysis Commenced	Dec 21, 2022						
Condition of Sample	Contained in one BOD bottle, one amber glass bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33650	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	3	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong
Transparency	m	-	-	0.6	Change from Natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	5.2	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampling By : Paramet Sattayakun โทร 09-9476-3233-9476

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

Approved by

N. Banmyit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS

S (Reports), AL GL rpt (21/02/2021)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146010
Date Received : Dec 21, 2022
Date Reported : Dec 28, 2022
Report Number : 2509764-1

Page 1 of 2

Sample Number	22146010-1						
Sampled Date	Dec 21, 2022 2:10 PM						
Sample Description	Seawater						
Location	บริเวณเขตน่านน้ำของโรงกลั่นปิโตรเลียมท่าเรือภาคใต้ (โรงกลั่นปิโตรเลียมดิบ) 500 เมตร จุดที่ 1						
Date Analysis Commenced	Dec 21, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46130	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.6	>4	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	7.9	7.0-8.5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CI (F)	Rayong
Salinity	ppt	-	0.1	29.4	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	29.0	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33500	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	2	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

The above results are valid only for the analyzed (tested) sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banmyit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS

S (Reports), AL GL rpt (21/02/2021)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146014
Date Received : Dec 21, 2022
Date Reported : Dec 28, 2022
Report Number : 2509788-1

Page 2 of 2

Sample Number	22146014-1						
Sampled Date	Dec 21, 2022 2:42 PM						
Sample Description	Seawater						
Location	บริเวณหลุมน้ำทะเลหน้าท่าเทียบเรือโรงกลั่นปิโตรเลียม 500 เมตร						
Date Analysis Commenced	Dec 21, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Transparency	m	-	-	0.6	Change from Natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	5.3	No Standard	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun โทร 09-9476-3233-9476

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

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences RIGHT SOLUTIONS www.alsglobal.com
1500-211 ENGL 5 (Revised), AL GL rpt (10-1144)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146018
Date Received : Dec 21, 2022
Date Reported : Dec 28, 2022
Report Number : 2509794-1

Page 1 of 2

Sample Number	22146018-1						
Sampled Date	Dec 21, 2022 2:00 PM						
Sample Description	Seawater						
Location	บริเวณหน้าท่าเทียบเรือท่าเทียบเรือโรงกลั่นปิโตรเลียม 500 เมตร และ 1						
Date Analysis Commenced	Dec 21, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45980	No Standard	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.7	>4	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	7.7	7.0-8.5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-C (F)	Rayong
Salinity	ppt	-	0.1	29.0	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	29.4	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33400	No Standard	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	<2	No Standard	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences RIGHT SOLUTIONS www.alsglobal.com
1500-211 ENGL 5 (Revised), AL GL rpt (10-1144)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146018
Date Received : Dec 21, 2022
Date Reported : Dec 28, 2022
Report Number : 2509794-1

Page 2 of 2

Page 2 of 3

Sample Number	22146018-1						
Sampled Date	Dec 21, 2022 2:00 PM						
Sample Description	Seawater						
Location	บริเวณหลุมน้ำทะเลหน้าท่าเทียบเรือโรงกลั่นปิโตรเลียม 500 เมตร และ 1						
Date Analysis Commenced	Dec 21, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Transparency	m	-	-	1.8	Change from Natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	2.8	No Standard	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun โทร 09-9476-3233-9476

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

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences RIGHT SOLUTIONS www.alsglobal.com
1500-211 ENGL 5 (Revised), AL GL rpt (10-1144)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146022
Date Received : Dec 21, 2022
Date Reported : Dec 28, 2022
Report Number : 2509798-1

Page 1 of 2

Sample Number	22146022-1						
Sampled Date	Dec 21, 2022 3:00 PM						
Sample Description	Seawater						
Location	บริเวณหลุมน้ำทะเลหน้าท่าเทียบเรือโรงกลั่นปิโตรเลียม 500 เมตร และ 2						
Date Analysis Commenced	Dec 21, 2022						
Condition of Sample	Contained in one BOD bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	45820	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	8.0	>4	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.1	7.0-8.5	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine	mg/L	-	0.01	<0.01	≤0.01	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-C (F)	Rayong
Salinity	ppt	-	0.1	29.5	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	27.6	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33000	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	<2	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences RIGHT SOLUTIONS www.alsglobal.com
1500-211 ENGL 5 (Revised), AL GL rpt (10-1144)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146042
Date Received : Dec 28, 2022
Date Reported : Jan 04, 2023
Report Number : 2509824-1

Page 2 of 2

Sample Number	22146042-1						
Sampled Date	Dec 28, 2022 10:13 AM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำทะเลหน้าท่าเรือโรงกลั่นปิโตรเคมี						
Date Analysis Commenced	Dec 28, 2022						
Condition of Sample	Contained in one amber glass bottle, one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	2	3	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong
Transparency	m	-	-	1.6	No Standard	Visual Method	Rayong
Turbidity	NTU	-	0.1	2.5	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline :
Sampling By : Paramet Sattayakun วิจัยและพัฒนา >323-a-9476

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

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phakdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences RIGHT SOLUTIONS PRECISION & INTEGRITY
1558-22 (ENGL) 5 (Version), All GL-SP (4-10PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146047
Date Received : Dec 28, 2022
Date Reported : Jan 03, 2023
Report Number : 2509832-1

Page 2 of 2

Remark :

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

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun วิจัยและพัฒนา >323-a-9476

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phakdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences RIGHT SOLUTIONS PRECISION & INTEGRITY
1558-22 (ENGL) 5 (Version), All GL-SP (11-12PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146047
Date Received : Dec 28, 2022
Date Reported : Jan 03, 2023
Report Number : 2509832-1

Page 1 of 2

Sample Number	22146047-1						
Sampled Date	Dec 28, 2022 10:04 AM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำทะเลหน้าท่าเรือโรงกลั่นปิโตรเคมีของ บริษัท 500 เมตร เขต 1						
Date Analysis Commenced	Dec 28, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47220	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.0	>4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	29.2	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	28.8	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32150	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.6	Change from Natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	2.7	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun วิจัยและพัฒนา >323-a-9476

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phakdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences RIGHT SOLUTIONS PRECISION & INTEGRITY
1558-22 (ENGL) 5 (Version), All GL-SP (11-12PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146049
Date Received : Dec 28, 2022
Date Reported : Jan 03, 2023
Report Number : 2509836-1

Page 1 of 2

Sample Number	22146049-1						
Sampled Date	Dec 28, 2022 10:10 AM						
Sample Description	Seawater						
Location	บริเวณแหล่งน้ำทะเลหน้าท่าเรือโรงกลั่นปิโตรเคมีของ บริษัท 500 เมตร เขต 2						
Date Analysis Commenced	Dec 28, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	47180	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.6	>4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-D (C)	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	28.9	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	28.7	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	33300	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.8	Change from Natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	3.9	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun วิจัยและพัฒนา >323-a-9476

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phakdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences RIGHT SOLUTIONS PRECISION & INTEGRITY
1558-22 (ENGL) 5 (Version), All GL-SP (11-12PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146049
Date Received : Dec 28, 2022
Date Reported : Jan 03, 2023
Report Number : 2509836-1

Page 2 of 2

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146052
Date Received : Dec 26, 2022
Date Reported : Jan 03, 2023
Report Number : 2509840-1

Page 1 of 2

Sample Number	22146052-1						
Sample Date	Dec 28, 2022 10:24 AM						
Sample Description	Seawater						
Location	บริเวณหลุมน้ำทะเลทางชายฝั่งตะวันออกของโรงกลั่นปิโตรเคมีหลุม 500 เมตร						
Date Analysis Commenced	Dec 28, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micromhos/cm	-	0.5	46620	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.6	>4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.1	7.0-8.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	29.2	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	28.4	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32050	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.7	Change from Natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	2.3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun รหัสประจำตัว 3-323-4-9476

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Mueang Kh. A. Phakdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences
www.alsglobal.com
RIGHT SOLUTIONS FASTER PEOPLE PEOPLE

5 (Report), AL GL-01 (11/10/04)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Mueang Kh. A. Phakdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences
www.alsglobal.com
RIGHT SOLUTIONS FASTER PEOPLE PEOPLE

5 (Report), AL GL-01 (11/10/04)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146052
Date Received : Dec 28, 2022
Date Reported : Jan 03, 2023
Report Number : 2509840-1

Page 2 of 2

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146055
Date Received : Dec 28, 2022
Date Reported : Jan 03, 2023
Report Number : 2509841-1

Page 1 of 2

Page 1 of 2

Sample Number	22146055-1						
Sample Date	Dec 28, 2022 10:00 AM						
Sample Description	Seawater						
Location	บริเวณหลุมน้ำทะเลทางชายฝั่งตะวันออกของโรงกลั่นปิโตรเคมีหลุม 1,000 เมตร จุดที่ 1						
Date Analysis Commenced	Dec 28, 2022						
Condition of Sample	Contained in one BOD bottle and one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Conductivity at 25 Degree C	micri.mhos/cm	-	0.5	47220	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	7.7	>4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
pH at 25 degree C	-	-	-	8.0	7.0-8.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Salinity	ppt	-	0.1	28.9	Change from lower salinity not more than 10%	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Temperature	Degree C	-	-	28.7	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	32500	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Transparency	m	-	-	1.8	Change from Natural condition not more than 10% of the lowest transparency	Visual Method	Rayong
Turbidity	NTU	-	0.1	2.7	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun รหัสประจำตัว 3-323-4-9476

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Mueang Kh. A. Phakdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences
www.alsglobal.com
RIGHT SOLUTIONS FASTER PEOPLE PEOPLE

5 (Report), AL GL-01 (11/10/04)

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Mueang Kh. A. Phakdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences
www.alsglobal.com
RIGHT SOLUTIONS FASTER PEOPLE PEOPLE

5 (Report), AL GL-01 (11/10/04)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2285319
Date Received : Jul 14, 2022
Date Reported : Jul 15, 2022
Report Number : 2371681-1

Page 1 of 1

Sample Number : 2285319-1
Sampled Date : Jul 14, 2022 12:57 PM
Sample Description : Seawater
Location : Station 2000 m.
Date Analysis Commenced : Jul 14, 2022
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Temperature	Degree C	-	-	31.7	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Tanasit Wongsachai

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

The above results are valid only for the analyzed/tested samples as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Witawan Borrak
Assistant Manager

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCE

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PEOPLE RIGHT PRICE

5 Reports, All GL, pt 1 (4.20H)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2285729
Date Received : Jul 20, 2022
Date Reported : Jul 21, 2022
Report Number : 2372606-1

Page 1 of 1

Sample Number : 2285729-1
Sampled Date : Jul 20, 2022 10:55 AM
Sample Description : Seawater
Location : Station 2000 m.
Date Analysis Commenced : Jul 20, 2022
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Temperature	Degree C	-	-	32.9	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pitthaya Thongtaeng

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

The above results are valid only for the analyzed/tested samples as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Witawan Borrak
Assistant Manager

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCE

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PEOPLE RIGHT PRICE

5 Reports, All GL, pt 1 (4.20H)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2285730
Date Received : Jul 27, 2022
Date Reported : Jul 29, 2022
Report Number : 2372604-1

Page 1 of 1

Sample Number : 2285730-1
Sampled Date : Jul 27, 2022 10:43 AM
Sample Description : Seawater
Location : Station 2000 m.
Date Analysis Commenced : Jul 27, 2022
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Temperature	Degree C	-	-	32.5	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Chainorn Lerthanakunchai

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

The above results are valid only for the analyzed/tested samples as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCE

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PEOPLE RIGHT PRICE

5 Reports, All GL, pt 1 (4.20H)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2294401
Date Received : Aug 03, 2022
Date Reported : Aug 04, 2022
Report Number : 2391752-1

Page 1 of 1

Sample Number : 2294401-1
Sampled Date : Aug 03, 2022 11:54 AM
Sample Description : Seawater
Location : Station 2000 m.
Date Analysis Commenced : Aug 03, 2022
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Temperature	Degree C	-	-	32.1	Based on APHA (2017), 2550 B	Rayong

Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested samples as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Muenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCE

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PEOPLE RIGHT PRICE

5 Reports, All GL, pt 1 (4.20H)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2296591
Date Received : Aug 10, 2022
Date Reported : Aug 11, 2022
Report Number : 2397508-1

Page 1 of 1

Sample Number	2296591-1						
Sampled Date	Aug 11, 2022 12:16 PM						
Sample Description	Seawater						
Location	Station 2000 m.						
Date Analysis Commenced	Aug 10, 2022						
Condition of Sample	data sheet						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing Temperature	Degree C	-	-	31.0	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

*N. Banphit*Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Mueang Kho A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS PEOPLE PEOPLE PEOPLE

S (Specs) at CL-apt (4.44PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2296592
Date Received : Aug 17, 2022
Date Reported : Aug 19, 2022
Report Number : 2397507-1

Page 1 of 1

Sample Number	2296592-1						
Sampled Date	Aug 17, 2022 9:54 AM						
Sample Description	Seawater						
Location	Station 2000 m.						
Date Analysis Commenced	Aug 17, 2022						
Condition of Sample	data sheet						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing Temperature	Degree C	-	-	31.0	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Pathompong Kornswat

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

*N. Banphit*Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Mueang Kho A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS PEOPLE PEOPLE PEOPLE

S (Specs) at CL-apt (4.44PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2296593
Date Received : Aug 24, 2022
Date Reported : Aug 25, 2022
Report Number : 2397505-1

Page 1 of 1

Page 1 of 1							
Sample Number	2296593-1						
Sampled Date	Aug 24, 2022 10:33 AM						
Sample Description	Seawater						
Location	Station 2000 m.						
Date Analysis Commenced	Aug 24, 2022						
Condition of Sample	data sheet						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing Temperature	Degree C	-	-	35.0	Change from natural condition not more than 2 degrees C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

*N. Banphit*Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Mueang Kho A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS PEOPLE PEOPLE PEOPLE

S (Specs) at CL-apt (4.44PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-S Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2296594
Date Received : Aug 31, 2022
Date Reported : Sep 02, 2022
Report Number : 2397501-1

Page 1 of 1

Sample Number	2296594-1						
Sampled Date	Aug 31, 2022 10:34 AM						
Sample Description	Seawater						
Location	Station 2000 m.						
Date Analysis Commenced	Aug 31, 2022						
Condition of Sample	data sheet						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Temperature	Degree C	-	-	32.8	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

*N. Banphit*Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Mueang Kho A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS PEOPLE PEOPLE PEOPLE

S (Specs) at CL-apt (4.44PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22107247
Date Received : Sep 09, 2022
Date Reported : Sep 12, 2022
Report Number : 2419010-1

Page 1 of 1

Sample Number : 22107247-1
Sample Date : Sep 09, 2022 10:19 AM
Sample Description : Seawater
Location : Station 2000 m.
Date Analysis Commenced : Sep 09, 2022
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Temperature	Degree C	-	-	32.4	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banomyit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 Watani (AL GL) (1:3.279M)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22107245
Date Received : Sep 14, 2022
Date Reported : Sep 16, 2022
Report Number : 2419012-1

Page 1 of 1

Sample Number : 22107245-1
Sample Date : Sep 14, 2022 10:56 AM
Sample Description : Seawater
Location : Station 2000 m.
Date Analysis Commenced : Sep 14, 2022
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Temperature	Degree C	-	-	32.5	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banomyit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 Watani (AL GL) (1:3.279M)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22107248
Date Received : Sep 21, 2022
Date Reported : Sep 23, 2022
Report Number : 2419009-1

Page 1 of 1

Sample Number : 22107248-1
Sample Date : Sep 21, 2022 10:09 AM
Sample Description : Seawater
Location : Station 2000 m.
Date Analysis Commenced : Sep 21, 2022
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Temperature	Degree C	-	-	30.7	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Sattayakun

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banomyit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 Watani (AL GL) (1:3.279M)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22107249
Date Received : Sep 28, 2022
Date Reported : Sep 29, 2022
Report Number : 2419006-1

Page 1 of 1

Sample Number : 22107249-1
Sample Date : Sep 28, 2022 9:57 AM
Sample Description : Seawater
Location : Station 2000 m.
Date Analysis Commenced : Sep 28, 2022
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
Temperature	Degree C	-	-	29.1	Based on APHA (2017), 2550 B	Rayong

Sampled By : Pathompong Kornasvat

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

The above results are valid only for the analyzed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banomyit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Meenam Khu A. Phukdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5 Watani (AL GL) (1:3.279M)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22115345
Date Received : Oct 05, 2022
Date Reported : Oct 07, 2022
Report Number : 2437792-1

Page 1 of 1

Sample Number	22115345-1
Sampled Date	Oct 05, 2022 10:19 AM
Sample Description	Seawater
Location	Station 2000 m.
Date Analysis Commenced	Oct 05, 2022
Condition of Sample	data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Temperature	Degree C	-	-	31.6	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Pithaya Thongtaeng

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22115346
Date Received : Oct 12, 2022
Date Reported : Oct 15, 2022
Report Number : 2437791-1

Page 1 of 1

Sample Number	22115346-1
Sampled Date	Oct 12, 2022 12:55 PM
Sample Description	Seawater
Location	สถานีวัดคุณภาพน้ำทะเลบริเวณท่าเรือ 2,000 เมตร
Date Analysis Commenced	Oct 12, 2022
Condition of Sample	data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Temperature	Degree C	-	-	32.4	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Tanasit Wongrachai

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

This above results are valid only for the analyzed sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banngkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS. FIGHT POLLUTION.

5 (Reports), All GL (pt 1.1249)

This above results are valid only for the analyzed sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banngkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS. FIGHT POLLUTION.

5 (Reports), All GL (pt 1.1249)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22115347
Date Received : Oct 19, 2022
Date Reported : Oct 21, 2022
Report Number : 2437785-1

Page 1 of 1

Sample Number	22115347-1
Sampled Date	Oct 19, 2022 10:30 AM
Sample Description	Seawater
Location	สถานีวัดคุณภาพน้ำทะเลบริเวณท่าเรือ 2,000 เมตร
Date Analysis Commenced	Oct 19, 2022
Condition of Sample	data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Temperature	Degree C	-	-	30.3	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Narumon thammamaso

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22115348
Date Received : Oct 26, 2022
Date Reported : Oct 29, 2022
Report Number : 2437784-1

Page 1 of 1

Sample Number	22115348-1
Sampled Date	Oct 26, 2022 9:16 AM
Sample Description	Seawater
Location	สถานีวัดคุณภาพน้ำทะเลบริเวณท่าเรือ 2,000 เมตร
Date Analysis Commenced	Oct 26, 2022
Condition of Sample	data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Temperature	Degree C	-	-	31.4	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)

Sampled By : Pithaya Thongtaeng

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

This above results are valid only for the analyzed sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banngkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS. FIGHT POLLUTION.

5 (Reports), All GL (pt 1.1249)

This above results are valid only for the analyzed sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banngkit

Narumon Banchongkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS. FIGHT POLLUTION.

5 (Reports), All GL (pt 1.1249)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133139
Date Received : Nov 02, 2022
Date Reported : Nov 04, 2022
Report Number : 2479061-1

Page 1 of 1

Sample Number : 22133139-1
Sampled Date : Nov 02, 2022 10:00 AM
Sample Description : Seawater
Location : จุดวางถัง ถังรองรับน้ำจากกระบวนการผลิตปิโตรเลียม 2,000 ลิตร
Date Analysis Commenced : Nov 02, 2022
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Temperature	Degree C	-	-	30.2	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Wanlop Hunchinao

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133140
Date Received : Nov 09, 2022
Date Reported : Nov 10, 2022
Report Number : 2479060-1

Page 1 of 1

Sample Number : 22133140-1
Sampled Date : Nov 09, 2022 10:50 AM
Sample Description : Seawater
Location : จุดวางถัง ถังรองรับน้ำจากกระบวนการผลิตปิโตรเลียม 2,000 ลิตร
Date Analysis Commenced : Nov 09, 2022
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Temperature	Degree C	-	-	30.4	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Wanlop Hunchinao

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

The above results are valid only for the analysed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences RIGHT SOLUTIONS

150M-LU-ENG 5 (Warning) At GL (21.00M)

The above results are valid only for the analysed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences RIGHT SOLUTIONS

150M-LU-ENG 5 (Warning) At GL (21.00M)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133141
Date Received : Nov 16, 2022
Date Reported : Nov 17, 2022
Report Number : 2479058-1

Page 1 of 1

Sample Number : 22133141-1
Sampled Date : Nov 16, 2022 1:47 PM
Sample Description : Seawater
Location : จุดวางถัง ถังรองรับน้ำจากกระบวนการผลิตปิโตรเลียม 2,000 ลิตร
Date Analysis Commenced : Nov 16, 2022
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Temperature	Degree C	-	-	31.5	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Pathompong Kornswat

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



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133142
Date Received : Nov 23, 2022
Date Reported : Nov 25, 2022
Report Number : 2479057-1

Page 1 of 1

Sample Number : 22133142-1
Sampled Date : Nov 23, 2022 10:08 AM
Sample Description : Seawater
Location : จุดวางถัง ถังรองรับน้ำจากกระบวนการผลิตปิโตรเลียม 2,000 ลิตร
Date Analysis Commenced : Nov 23, 2022
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Temperature	Degree C	-	-	30.3	Change from natural condition not more than 2 degree C	Based on APHA (2017), 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampled By : Paramet Saitayakun

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

The above results are valid only for the analysed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences RIGHT SOLUTIONS

150M-LU-ENG 5 (Warning) At GL (21.00M)

The above results are valid only for the analysed/tested sample(s) as indicated in the report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that the report is not reproduced except in full.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phakdang Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences RIGHT SOLUTIONS

150M-LU-ENG 5 (Warning) At GL (21.00M)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22146028
Date Received : Dec 28, 2022
Date Reported : Dec 29, 2022
Report Number : 2509805-1

Page 1 of 1

Sample Number : 22146028-1
Sampled Date : Dec 28, 2022 9:56 AM
Sample Description : Seawater
Location : สถานีจ่ายน้ำประปาเทศบาลเมืองระยอง 2,000 เมตร
Date Analysis Commenced : Dec 28, 2022
Condition of Sample : data sheet

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Temperature	Degree C	-	-	28.5	Change from natural condition not more than 2 degree C	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong

Guideline : Notification of the National Environmental Board, B.E.2564 : Coastal Water Quality Standard (Class 5)
Sampling By : Paramet Sattayakun ปรเมศฐาธิ ๙323-๙-9476

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

Approved by

N. Banchongkit

Narumon Banchongkit
Supervisor

The above results are valid only for the analyzed (tested samples) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced without its full.

ADDRESS 616/10 Moo 5 T. Maenam Khru A. Phraekdaeng Rayong 21140 Thailand PHONE +66 9 3304 8555 FAX +66 9 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS (S) 137 24 5 0140 95 0 2101 1 1

0204-22/ENAL

5 (Version), AL-GL-ryt (12/22AM)

ภาคผนวก ค-6

ใบรายงานผลการติดตามตรวจสอบทรัพยากรธรรมชาติ
(แปลงกักต่อนพืช,แปลงกักต่อนสัตว์ ,สัตว์หน้าดิน ,สัตว์น้ำวัยอ่อน)



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

Client : GLOW ENERGY PUBLIC COMPANY LIMITED

Address : 11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

Project Location : Glow Phase5

รายงานผลการวิเคราะห์แหล่งก้นดอนพีช

ตาราง ผลการวิเคราะห์แหล่งก้นดอนพีช (เก็บตัวอย่างวันที่ 14 กันยายน 2565)

สกุลแพลงก์ตอนพีช	ปริมาณแพลงก์ตอนพีช (หน่วยต่อลูกบาศก์เมตร)					
	22102536-1	22102536-2	22102536-3	22102536-4	22102536-5	22102536-6
Division Cyanophyta						
Class Cyanophyceae						
Order Nostocales						
Family Oscillatoriaceae						
1. <i>Oscillatoria</i> sp. (สาหร่าย)	58,000	634,000	16,000	134,000	125,000	-
Family Nostocaceae						
2. <i>Pseudanabaena</i> sp.	69,000	44,000	128,000	32,000	-	9,000
Division Chlorophyta						
Class Chlorophyceae						
Order Chlorococcales						
Family Scenedesmaceae						
3. <i>Scenedesmus</i> sp.	-	-	-	-	8,000	-
Order Ulotrichales						
Family Ulotrichaceae						
4. <i>Geminella</i> sp.	-	-	-	-	17,000	17,000

ตาราง ผลการวิเคราะห์แหล่งก้นดอนพีช (เก็บตัวอย่างวันที่ 14 กันยายน 2565)

(ต่อ)

สกุลแพลงก์ตอนพีช	ปริมาณแพลงก์ตอนพีช (หน่วยต่อลูกบาศก์เมตร)					
	22102536-1	22102536-2	22102536-3	22102536-4	22102536-5	22102536-6
Division Chromophyta						
Class Bacillariophyceae						
Order Biddulphiales						
Suborder Coscinodiscineae						
Family Thalassiosiraceae						
5. <i>Cyclotella</i> sp.	519,000	352,000	401,000	288,000	167,000	239,000
6. <i>Lauderia</i> sp. (สาหร่าย)	-	35,000	96,000	-	-	-
7. <i>Skeletonema</i> sp. (สาหร่าย)	-	26,000	-	115,000	67,000	-
8. <i>Thalassiosira</i> sp.	500,000	370,000	187,000	614,000	34,000	257,000
Family Melosiraceae						
9. <i>Melosira</i> sp.	-	-	-	26,000	-	-
Family Aulacoseiraceae						
10. <i>Aulacodiscus</i> sp. (สาหร่าย)	10,000	-	-	-	-	-
Family Leptocylindraceae						
11. <i>Corethron</i> sp.	118,000	88,000	214,000	179,000	75,000	77,000
Family Coscinodiscaceae						
12. <i>Coscinodiscus</i> sp.	98,000	79,000	64,000	275,000	8,000	44,000
13. <i>Paralia</i> sp. (สาหร่าย)	-	-	-	13,000	-	-
Family Asterolampraceae						
14. <i>Asterolampra</i> sp.	20,000	-	16,000	32,000	-	26,000
15. <i>Asteromphalus</i> sp.	-	9,000	-	-	-	9,000
Family Hemidiscaceae						
16. <i>Actinopterychus</i> sp.	-	18,000	27,000	32,000	8,000	-
Suborder Rhizosoleniineae						
Family Rhizosoleniaceae						
17. <i>Dactylosolen</i> sp.	29,000	-	284,000	160,000	67,000	-
18. <i>Guinardia</i> sp.	26,264,000	1,778,000	14,339,000	29,312,000	317,000	1,915,000

ตาราง ผลการวิเคราะห์แฟลกก์ตอนพืช (เก็บตัวอย่างวันที่ 14 กันยายน 2565)

(ต่อ)

สกุลแฟลกก์ตอนพืช	ปริมาณแฟลกก์ตอนพืช (หน่วยต่อลูกบาศก์เมตร)					
	22102536-1	22102536-2	22102536-3	22102536-4	22102536-5	22102536-6
19. <i>Proboscia</i> sp.	-	79,000	32,000	26,000	142,000	-
20. <i>Pseudosolenia</i> sp.	-	9,000	43,000	109,000	-	-
21. <i>Rhizosolenia</i> sp.	756,000	273,000	359,000	1,221,000	59,000	61,000
Suborder Biddulphiineae						
Family Hemiaulaceae						
22. <i>Cerataulina</i> sp. (สาข)	725,000	80,000	894,000	1,197,000	593,000	68,000
23. <i>Climacodium</i> sp. (สาข)	20,000	18,000	80,000	128,000	-	-
24. <i>Eucampia</i> sp. (สาข)	451,000	79,000	690,000	147,000	-	9,000
25. <i>Hemiaulus</i> sp. (สาข)	78,000	79,000	348,000	762,000	-	-
Family Chaetoceraceae						
26. <i>Bacteriastrum</i> sp. (สาข)	1,039,000	897,000	1,076,000	691,000	-	34,000
27. <i>Chaetoceros</i> sp. (สาข)	5,243,000	4,568,000	5,212,000	9,114,000	542,000	974,000
Family Lithodesmaceae						
28. <i>Ditylum</i> sp.	39,000	53,000	139,000	32,000	142,000	26,000
29. <i>Helicotheca</i> sp.	-	-	27,000	-	33,000	-
Family Eupodiscaceae						
30. <i>Odontella</i> sp.	108,000	132,000	5,000	89,000	25,000	26,000
Order Bacillariales						
Suborder Fragilariineae						
Family Thalassionemataceae						
31. <i>Thalassionema</i> sp.	412,000	123,000	348,000	1,088,000	743,000	103,000
Family Licmophoriaceae						
32. <i>Licmophora</i> sp.	108,000	-	-	13,000	8,000	9,000
Suborder Bacillariineae						
Family Naviculaceae						
33. <i>Amphora</i> sp.	49,000	18,000	86,000	435,000	33,000	17,000
34. <i>Diploneis</i> sp.	10,000	-	-	6,000	-	-

ตาราง ผลการวิเคราะห์แฟลกก์ตอนพืช (เก็บตัวอย่างวันที่ 14 กันยายน 2565)

(ต่อ)

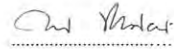
สกุลแฟลกก์ตอนพืช	ปริมาณแฟลกก์ตอนพืช (หน่วยต่อลูกบาศก์เมตร)					
	22102536-1	22102536-2	22102536-3	22102536-4	22102536-5	22102536-6
35. <i>Meunier</i> sp.	147,000	35,000	16,000	211,000	-	120,000
36. <i>Navicula</i> sp.	-	26,000	-	-	-	-
37. <i>Pleurosigma</i> sp.	108,000	150,000	-	269,000	41,000	26,000
38. <i>Trachyneis</i> sp.	-	-	-	26,000	-	-
Family Bacillariaceae						
39. <i>Cylindrotheca</i> sp.	147,000	-	-	-	-	17,000
40. <i>Nitzschia</i> sp.	-	-	-	-	25,000	-
41. <i>Pseudo-nitzschia</i> sp. (สาข)	-	-	48,000	45,000	58,000	-
Family Surirellaceae						
42. <i>Surirella</i> sp.	59,000	-	-	-	-	-
Class Dictyophyceae						
Order Dictyochaes						
Family Dictyophyceae						
43. <i>Dictyocha</i> sp.	-	-	-	-	-	9,000
Class Dinophyceae						
Order Prorocentrales						
Family Prorocentraceae						
44. <i>Prorocentrum</i> sp.	-	35,000	128,000	-	33,000	-
Order Dinophysiales						
Family Dinophysaceae						
45. <i>Dinophysis</i> sp.	304,000	18,000	107,000	70,000	-	-
46. <i>Phalacroma</i> sp.	29,000	-	-	6,000	-	-
Order Gymnodiniales						
Family Gymnodiniaceae						
47. <i>Gymnodinium</i> sp.	20,000	-	-	-	-	-
48. <i>Gyrodinium</i> sp.	176,000	-	134,000	-	-	34,000


ตาราง ผลการวิเคราะห์แพลงก์ตอนพืช (เก็บตัวอย่างวันที่ 14 กันยายน 2565)

(ต่อ)

สกุลแพลงก์ตอนพืช	ปริมาณแพลงก์ตอนพืช (หน่วยต่อลูกบาศก์เมตร)					
	22102536-1	22102536-2	22102536-3	22102536-4	22102536-5	22102536-6
Order Noctilucales						
Family Noctilucaeae						
49. <i>Noctiluca</i> sp.	-	9,000	-	-	-	-
Order Gonyaulacales						
Family Ceratiaceae						
50. <i>Ceratium</i> sp.	49,000	-	96,000	-	-	-
Family GoniDOMACEAE						
51. <i>Goniodoma</i> sp.	216,000	-	-	-	-	-
Family Pyrophacaceae						
52. <i>Pyrophacus</i> sp.	59,000	-	-	-	-	-
Order Peridiniales						
Family Peridiniaceae						
53. <i>Peridinium</i> sp.	-	18,000	43,000	-	-	9,000
Family Protoperidiniaceae						
54. <i>Protoperidinium</i> sp.	206,000	18,000	134,000	103,000	50,000	43,000
ชนิดแพลงก์ตอนพืช	35	32	33	35	26	26
ปริมาณแพลงก์ตอนพืช	38,243,000	10,150,000	25,817,000	47,000,000	3,420,000	4,178,000
ดัชนีความหลากหลายแพลงก์ตอนพืช	1.3486	2.0158	1.6831	1.4330	2.5075	1.8742
ดัชนีความสม่ำเสมอแพลงก์ตอนพืช	0.3793	0.5816	0.4814	0.4031	0.7696	0.5752

Condition of Sample : contained in one plastic bottle, sample containers comply to pretreatment- preservation standards (APHA, USEPA)


(นางสาวกนกวรรณ ขวาค่อน)
ผู้วิเคราะห์


(นายอลงกต อินทรชาติ)
หัวหน้าสถานีวิจัยประมงศรีราชา

Sample Location : 1. สถานี 22102536-1 : สถานี A อยู่ห่างจากจุดระบายน้ำทั้ง 500 เมตร
2. สถานี 22102536-2 : สถานี B อยู่ห่างจากจุดระบายน้ำทั้ง 1,000 เมตร
3. สถานี 22102536-3 : สถานี C อยู่ห่างจากจุดระบายน้ำทั้ง 1,000 เมตร
4. สถานี 22102536-4 : สถานี D อยู่ห่างจากจุดระบายน้ำทั้ง 500 เมตร
5. สถานี 22102536-5 : สถานี I บริเวณใกล้จุดสูบน้ำไปหล่อเย็น
6. สถานี 22102536-6 : สถานี O อยู่ห่างจากจุดระบายน้ำทั้ง 500 เมตร



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

Client : GLOW ENERGY PUBLIC COMPANY LIMITED

Address : 11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

Project Location : Glow Phase5

รายงานผลการวิเคราะห์แพลงก์ตอนสัตว์

ตาราง ผลการวิเคราะห์แพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 14 กันยายน 2565)

สกุล/กลุ่มแพลงก์ตอนสัตว์	ปริมาณแพลงก์ตอนสัตว์ (หน่วยต่อลูกบาศก์เมตร)					
	22102536-1	22102536-2	22102536-3	22102536-4	22102536-5	22102536-6
Phylum Protozoa						
Subphylum Ciliophora						
Class Ciliata						
Subclass Spirotricha						
Order Tintinnida						
Family Tintinnididae						
1. <i>Leprotintinus</i> sp.	-	-	-	6,000	-	-
2. <i>Tintinnidium</i> sp.	-	-	-	6,000	-	-
Family Codonellidae						
3. <i>Tintinnopsis</i> sp.	29,000	18,000	10,000	12,000	125,000	77,000
Family Codonellopsidae						
4. <i>Codonellopsis</i> sp.	10,000	9,000	-	-	-	-
Family Tintinnidae						
5. <i>Amphorella</i> sp.	-	-	-	6,000	-	-



Chaetoceros sp.



Bacteriastrum sp.



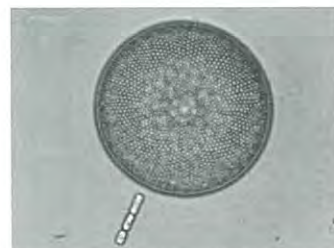
Cyclotella sp.



Guinardia sp.



Rhizosolenia sp.



Coscinodiscus sp.

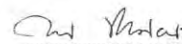
ตาราง ผลการวิเคราะห์แพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 14 กันยายน 2565)

(ต่อ)

สกุล/กลุ่มแพลงก์ตอนสัตว์	ปริมาณแพลงก์ตอนสัตว์ (หน่วยต่อลูกบาศก์เมตร)					
	22102536-1	22102536-2	22102536-3	22102536-4	22102536-5	22102536-6
Phylum Annelida						
Class Polychaeta						
6. Polychaete larvae	10,000	-	-	-	-	-
Phylum Arthropoda						
Class Crustacea						
Subclass Copepoda						
7. Copepod nauplii	10,000	26,000	91,000	166,000	84,000	43,000
Order Calanoida						
8. Calanoid copepod	-	-	5,000	6,000	-	-
Order Cyclopoida						
9. Cyclopoid copepod	10,000	-	5,000	-	-	-
Phylum Mollusca						
Class Bivalvia						
10. Pelecypod larvae	-	-	11,000	-	-	-
Phylum Chordata						
Subphylum Urochordata						
Class Larvacea						
Family Oikopleuridae						
11. Oikopleura sp.	49,000	-	16,000	6,000	17,000	9,000
ชนิดแพลงก์ตอนสัตว์	6	3	6	7	3	3
ปริมาณแพลงก์ตอนสัตว์	118,000	53,000	138,000	208,000	226,000	129,000
ดัชนีความหลากหลายแพลงก์ตอนสัตว์	1.5465	1.0172	1.1566	0.8560	0.8900	0.8600
ดัชนีความสม่ำเสมอแพลงก์ตอนสัตว์	0.8631	0.9259	0.6455	0.4399	0.8101	0.7828

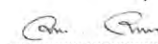
- Sample Location :
1. สถานี 22102536-1 : สถานี A อยู่ห่างจากจุดระบายน้ำทิ้ง 500 เมตร
 2. สถานี 22102536-2 : สถานี B อยู่ห่างจากจุดระบายน้ำทิ้ง 1,000 เมตร
 3. สถานี 22102536-3 : สถานี C อยู่ห่างจากจุดระบายน้ำทิ้ง 1,000 เมตร
 4. สถานี 22102536-4 : สถานี D อยู่ห่างจากจุดระบายน้ำทิ้ง 500 เมตร
 5. สถานี 22102536-5 : สถานี I บริเวณใกล้จุดสูบน้ำไปหล่อเย็น
 6. สถานี 22102536-6 : สถานี O อยู่ห่างจากจุดระบายน้ำทิ้ง 500 เมตร

Condition of Sample : contained in one plastic bottle, sample containers comply to pretreatment- preservation standards (APHA, USEPA)



(นางสาวกนกวรรณ ขาวค่อน)

ผู้วิเคราะห์

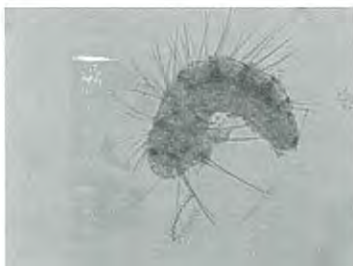


(นายอลงกต อินทรชาติ)

หัวหน้าสถานีวิจัยประมงสัตว์น้ำ



Tintinnopsis sp.



Polychaete larvae



Copepod nauplii



Pelecypod larvae



Oikopleura sp.



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

Client : GLOW ENERGY PUBLIC COMPANY LIMITED

Address : 11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

Project Location : Glow Phase5

รายงานผลการวิเคราะห์สัตว์หน้าดิน

ตาราง ผลการวิเคราะห์สัตว์หน้าดิน (เก็บตัวอย่างวันที่ 14 กันยายน 2565)

สกุลสัตว์หน้าดิน	ปริมาณสัตว์หน้าดิน (ตัวต่อตารางเมตร)					
	22102532-1	22102532-2	22102532-3	22102532-4	22102532-5	22102532-6
Phylum Annelida						
Class Polychaeta						
Order Capitellida						
Family Capitellidae						
<i>Heteromastus</i> sp. (ไส้เดือนทะเล)	-	-	-	45	15	-
Family Maldanidae						
<i>Euclymene</i> sp. (ไส้เดือนทะเล)	-	-	-	15	-	-
Order Cirratulida						
Family Paraonidae						
<i>Paraonis</i> sp. (ไส้เดือนทะเล)	45	15	15	-	-	-
Order Eunicida						
Family Eunicidae						
<i>Marphysa</i> sp. (ไส้เดือนทะเล)	15	-	237	-	-	-
Family Onuphidae						
<i>Diopatra</i> sp. (ไส้เดือนทะเล)	-	15	-	-	-	-

ตาราง ผลการวิเคราะห์สัตว์หน้าดิน (เก็บตัวอย่างวันที่ 14 กันยายน 2565)

(ต่อ)

สกุลสัตว์หน้าดิน	ปริมาณสัตว์หน้าดิน (ตัวต่อตารางเมตร)					
	22102532-1	22102532-2	22102532-3	22102532-4	22102532-5	22102532-6
Order Opheliida						
Family Opheliidae						
Armandia sp. (ไส้เดือนทะเล)	15	-	-	-	15	
Ophelina sp. (ไส้เดือนทะเล)	-	15	-	-	-	-
Order Orbiniida						
Family Orbiniidae						
Scoloplos sp. (ไส้เดือนทะเล)	119	-	45	-	-	-
Order Phyllodocida						
Family Glyceridae						
Glycera sp. (ไส้เดือนทะเล)	-	-	15	-	-	-
Family Nephtyidae						
Nephtys sp. (ไส้เดือนทะเล)	15	-	-	15	-	-
Family Nereididae						
Nereis sp. (แม่เพรียง)	-	-	30	-	-	-
Order Spionida						
Family Magelonidae						
Magelona sp. (ไส้เดือนทะเล)	-	-	15	-	-	15
Phylum Arthropoda						
Class Malacostraca						
Order Decapoda						
Family Diogenidae						
Diogenes sp. (ปูเสฉวน)	-	-	15	-	-	-
Family Panaeidae						
Penaeus sp. (กุ้งชนิดหนึ่ง)	15	-	-	-	-	-

ตาราง ผลการวิเคราะห์สัตว์หน้าดิน (เก็บตัวอย่างวันที่ 14 กันยายน 2565)

(ต่อ)

สกุลสัตว์หน้าดิน	ปริมาณสัตว์หน้าดิน (ตัวต่อตารางเมตร)					
	22102532-1	22102532-2	22102532-3	22102532-4	22102532-5	22102532-6
Phylum Mollusca						
Class Bivalvia						
Order Venerida						
Family Mactridae						
Mactra sp. (หอยสองฝาชนิดหนึ่ง)	-	60	-	-	-	-
Family Tellinidae						
Tellina sp. (หอยสองฝาชนิดหนึ่ง)	-	30	45	-	-	-
Family Veneridae						
Timoclea sp. (หอยสองฝาชนิดหนึ่ง)	-	-	45	-	15	-
Phylum Echinodermata						
Class Echinoidea						
Order Camarodonta						
Family Temnopleuridae						
Temnopleurus sp. (เม่นทะเล)	-	30	-	-	-	-
Phylum Chordata						
Class Leptocardii						
Order Amphioxiformes						
Family Branchiostomatidae						
Branchiostoma sp. (แอมฟioxixus)	-	-	15	-	-	-
ชนิดสัตว์หน้าดิน	6	6	10	3	3	1
ปริมาณสัตว์หน้าดิน	224	165	477	75	45	15
ค่าดัชนีความหลากหลายสัตว์หน้าดิน	1.3826	1.6417	1.7336	0.9503	1.0986	0.0000

Sample Location : 1. สถานี 22102532-1 : สถานี A อยู่ห่างจากจุดระบายน้ำทั้ง 500 เมตร
2. สถานี 22102532-2 : สถานี B อยู่ห่างจากจุดระบายน้ำทั้ง 1,000 เมตร
3. สถานี 22102532-3 : สถานี C อยู่ห่างจากจุดระบายน้ำทั้ง 1,000 เมตร
4. สถานี 22102532-4 : สถานี D อยู่ห่างจากจุดระบายน้ำทั้ง 500 เมตร
5. สถานี 22102532-5 : สถานี I บริเวณใกล้จุดสูบน้ำไปหล่อเย็น
6. สถานี 22102532-6 : สถานี O อยู่ห่างจากจุดระบายน้ำทั้ง 500 เมตร

Condition of Sample : contained in one plastic zip bag

วรรณวิมล กันทะวงษ์
(นายอรรถวุฒิ กันทะวงษ์)
ผู้วิเคราะห์

อนุ อนุ
(นายอลงกต อินทรชาติ)
หัวหน้าสถานีวิจัยประมงศรีราชา



Diogenes sp.



Glycera sp.



Diopatra sp.



Armandia sp.



สถานีวิจัยประมงศรีราชา

101/12 หมู่ 9 ต. บางพระ

อ. ศรีราชา จ. ชลบุรี 20110

โทร./โทรสาร. (038) 311379

Client : GLOW ENERGY PUBLIC COMPANY LIMITED

Address : 11, 1-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

Project Location : Glow Phase5

รายงานผลการวิเคราะห์สัตว์น้ำวัยอ่อน

ตาราง ผลการวิเคราะห์สัตว์น้ำวัยอ่อน (เก็บตัวอย่างวันที่ 14 กันยายน 2565)

กลุ่มของสัตว์น้ำวัยอ่อน	ปริมาณสัตว์น้ำวัยอ่อน (หน่วยต่อลูกบาศก์เมตร)	
	22102578-1	22102578-2
Phylum Arthropoda		
Class Crustacea		
Subclass Copepoda		
Copepod nauplii (ตัวอ่อน โคพีพอดระยะนาอเพลียส)	26,000	84,000
จำนวนกลุ่มของสัตว์น้ำวัยอ่อนทั้งหมด	1	1
ปริมาณของสัตว์น้ำวัยอ่อนทั้งหมด	26,000	84,000

Sample Location : 1. สถานี 22102578-1 : สถานี B อยู่ห่างจากจุดระบายน้ำทั้ง 1,000 เมตร
2. สถานี 22102578-2 : สถานี I บริเวณใกล้จุดสูบน้ำเพื่อนำไปหล่อเย็น

Condition of Sample : contained in one plastic bottle, sample containers comply to pretreatment- preservation standards (APHA, USEPA)

(นางสาวกนกวรรณ ขาวค้อน)

ผู้วิเคราะห์

(นายอลงกต อินทรชาติ)

หัวหน้าสถานีวิจัยประมงศรีราชา

รายงานผลการวิเคราะห์สัตว์น้ำวัยอ่อน (Aquatic larvae)

1. สถานี 22102578-1 : สถานี B อยู่ห่างจากจุดระบายน้ำทั้ง 1,000 เมตร

ทำการเก็บตัวอย่างสัตว์น้ำวัยอ่อนเมื่อวันที่ 14 กันยายน 2565 จากการศึกษาวีเคราะห์ ตัวอย่างพบสัตว์น้ำวัยอ่อนใน Phylum Arthropoda จำนวน 1 กลุ่ม มีปริมาณรวมทั้งหมด 26,000 หน่วยต่อลูกบาศก์เมตร รายละเอียดกลุ่มและปริมาณสัตว์น้ำวัยอ่อนที่วิเคราะห์ ดังแสดงไว้ในตาราง

2. สถานี 22102578-2 : สถานี I บริเวณใกล้จุดสูบน้ำเพื่อนำไปหล่อเย็น

ทำการเก็บตัวอย่างสัตว์น้ำวัยอ่อนเมื่อวันที่ 14 กันยายน 2565 จากการศึกษาวีเคราะห์ ตัวอย่างพบสัตว์น้ำวัยอ่อนใน Phylum Arthropoda จำนวน 1 กลุ่ม มีปริมาณรวมทั้งหมด 84,000 หน่วยต่อลูกบาศก์เมตร รายละเอียดกลุ่มและปริมาณสัตว์น้ำวัยอ่อนที่วิเคราะห์ ดังแสดงไว้ในตาราง



Copepod nauplii

ภาคผนวก ค-7

ใบรายงานผลการติดตามตรวจสอบระดับเสียงโดยทั่วไป



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133611
Date Received : Nov 15, 2022
Date Reported : Nov 21, 2022
Report Number: 2496178-1

Page 1 of 1

Sample Number 22133611-1
Parameter Noise (Leq 24 hrs.)
Location รั้วหน้าโรงไฟฟ้าเดิม (Fence of Project Site) (GPS 47P 0731886, 1402471)
Measurement Date Nov 07 - Nov 08, 2022
Measurement by Jakkarin Manwicha
Sound Level meter Serial No. 734221

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	58.3	73.2	56.2
11:00 AM - 12:00 PM	56.7	64.9	56.0
12:00 PM - 01:00 PM	57.2	70.3	56.2
01:00 PM - 02:00 PM	57.6	69.6	56.7
02:00 PM - 03:00 PM	57.1	64.0	56.3
03:00 PM - 04:00 PM	61.1	69.4	56.5
04:00 PM - 05:00 PM	68.0	71.1	63.7
05:00 PM - 06:00 PM	65.4	70.4	59.8
06:00 PM - 07:00 PM	62.7	70.7	58.1
07:00 PM - 08:00 PM	59.9	69.3	57.0
08:00 PM - 09:00 PM	58.5	66.6	56.7
09:00 PM - 10:00 PM	57.7	62.2	56.8
10:00 PM - 11:00 PM	57.7	60.2	56.8
11:00 PM - 12:00 AM	57.7	60.6	56.8
12:00 AM - 01:00 AM	57.7	63.7	56.7
01:00 AM - 02:00 AM	58.8	72.8	57.1
02:00 AM - 03:00 AM	58.2	66.5	57.1
03:00 AM - 04:00 AM	58.6	74.3	56.9
04:00 AM - 05:00 AM	59.1	71.0	56.8
05:00 AM - 06:00 AM	57.5	70.2	56.3
06:00 AM - 07:00 AM	57.4	71.3	55.6
07:00 AM - 08:00 AM	56.6	74.0	55.4
08:00 AM - 09:00 AM	56.4	71.6	55.5
09:00 AM - 10:00 AM	56.7	67.6	55.6

Leq Average 24 hrs. (dB(A)) 60.2
Lmax (dB(A)) 74.3
L90 (dB(A)) 56.7
Ldn (dB(A)) 65.1
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supt S

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133611
Date Received : Nov 15, 2022
Date Reported : Nov 21, 2022
Report Number: 2496179-1

Page 1 of 1

Sample Number 22133611-2
Parameter Noise (Leq 24 hrs.)
Location รั้วหน้าโรงไฟฟ้าเดิม (Fence of Project Site) (GPS 47P 0731886, 1402471)
Measurement Date Nov 08 - Nov 09, 2022
Measurement by Jakkarin Manwicha
Sound Level meter Serial No. 734221

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	56.1	70.2	55.4
11:00 AM - 12:00 PM	58.8	80.9	55.6
12:00 PM - 01:00 PM	57.5	69.5	55.9
01:00 PM - 02:00 PM	56.9	62.2	56.2
02:00 PM - 03:00 PM	57.6	64.2	56.1
03:00 PM - 04:00 PM	61.3	69.5	56.4
04:00 PM - 05:00 PM	62.2	70.1	57.9
05:00 PM - 06:00 PM	61.0	67.1	58.1
06:00 PM - 07:00 PM	58.8	65.0	57.0
07:00 PM - 08:00 PM	57.4	59.8	56.7
08:00 PM - 09:00 PM	56.9	59.9	56.3
09:00 PM - 10:00 PM	56.8	58.6	56.3
10:00 PM - 11:00 PM	56.8	58.9	56.3
11:00 PM - 12:00 AM	57.0	59.8	56.5
12:00 AM - 01:00 AM	57.2	60.5	56.6
01:00 AM - 02:00 AM	58.5	78.1	57.0
02:00 AM - 03:00 AM	58.2	69.5	57.0
03:00 AM - 04:00 AM	59.0	70.3	57.4
04:00 AM - 05:00 AM	58.9	74.0	56.6
05:00 AM - 06:00 AM	61.4	67.7	56.4
06:00 AM - 07:00 AM	57.7	69.0	56.3
07:00 AM - 08:00 AM	56.2	69.1	55.1
08:00 AM - 09:00 AM	56.7	74.7	55.1
09:00 AM - 10:00 AM	57.4	74.8	55.4

Leq Average 24 hrs. (dB(A)) 58.5
Lmax (dB(A)) 80.9
L90 (dB(A)) 56.3
Ldn (dB(A)) 64.9
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supt S

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133611
Date Received : Nov 15, 2022
Date Reported : Nov 21, 2022
Report Number: 2496180-1

Page 1 of 1

Sample Number	22133611-3
Parameter	Noise (Leq 24 hrs.)
Location	บริเวณหน้าโรงไฟฟ้าเดิม (Fence of Project Site) (GPS 47P 0731886, 1402471)
Measurement Date	Nov 09 - Nov 10, 2022
Measurement by	Jakkarin Manwicha
Sound Level meter	Serial No. 734221

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	57.5	69.9	56.1
11:00 AM - 12:00 PM	58.0	67.5	56.1
12:00 PM - 01:00 PM	57.6	68.7	55.9
01:00 PM - 02:00 PM	56.6	65.8	55.9
02:00 PM - 03:00 PM	56.6	70.4	56.0
03:00 PM - 04:00 PM	56.8	66.9	56.0
04:00 PM - 05:00 PM	57.5	62.9	56.5
05:00 PM - 06:00 PM	58.1	62.9	57.0
06:00 PM - 07:00 PM	57.5	63.5	56.5
07:00 PM - 08:00 PM	57.1	65.8	56.4
08:00 PM - 09:00 PM	56.8	58.8	56.3
09:00 PM - 10:00 PM	56.7	59.5	56.1
10:00 PM - 11:00 PM	56.7	59.6	56.1
11:00 PM - 12:00 AM	56.8	59.2	56.2
12:00 AM - 01:00 AM	57.0	62.3	56.3
01:00 AM - 02:00 AM	58.0	70.1	56.8
02:00 AM - 03:00 AM	58.5	70.3	57.1
03:00 AM - 04:00 AM	60.0	79.9	57.2
04:00 AM - 05:00 AM	60.1	80.9	56.9
05:00 AM - 06:00 AM	56.9	72.4	55.5
06:00 AM - 07:00 AM	56.4	70.6	55.0
07:00 AM - 08:00 AM	55.9	70.2	54.5
08:00 AM - 09:00 AM	56.4	71.1	54.7
09:00 AM - 10:00 AM	57.2	72.7	55.8

Leq Average 24 hrs. (dB(A)) 57.5
Lmax (dB(A)) 80.9
L90 (dB(A)) 56.1
Ldn (dB(A)) 64.3
Standard (dB(A)) 70 115
Reference Method : ISO1996-1 and 1996-2
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548
Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsunwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports_Air Noise.rpt (12:25PM)



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133611
Date Received : Nov 15, 2022
Date Reported : Nov 21, 2022
Report Number: 2496181-1

Page 1 of 1

Sample Number	22133611-4
Parameter	Noise (Leq 24 hrs.)
Location	บริเวณหน้าโรงไฟฟ้าเดิม (Fence of Project Site) (GPS 47P 0731886, 1402471)
Measurement Date	Nov 10 - Nov 11, 2022
Measurement by	Jakkarin Manwicha
Sound Level meter	Serial No. 734221

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	60.1	68.4	59.8
11:00 AM - 12:00 PM	60.4	62.1	59.8
12:00 PM - 01:00 PM	60.5	62.3	60.0
01:00 PM - 02:00 PM	60.8	62.4	60.2
02:00 PM - 03:00 PM	59.9	62.9	59.0
03:00 PM - 04:00 PM	59.9	62.6	59.1
04:00 PM - 05:00 PM	60.4	63.0	60.0
05:00 PM - 06:00 PM	59.3	61.7	58.1
06:00 PM - 07:00 PM	59.4	61.7	58.2
07:00 PM - 08:00 PM	60.4	62.4	60.1
08:00 PM - 09:00 PM	60.6	64.0	60.1
09:00 PM - 10:00 PM	60.8	63.2	60.1
10:00 PM - 11:00 PM	60.6	62.8	60.1
11:00 PM - 12:00 AM	59.2	62.8	58.0
12:00 AM - 01:00 AM	60.7	62.7	60.0
01:00 AM - 02:00 AM	60.5	62.0	60.1
02:00 AM - 03:00 AM	60.5	63.6	60.1
03:00 AM - 04:00 AM	60.5	63.5	60.0
04:00 AM - 05:00 AM	59.8	62.1	59.1
05:00 AM - 06:00 AM	60.5	64.0	59.8
06:00 AM - 07:00 AM	60.3	62.8	59.7
07:00 AM - 08:00 AM	59.9	62.5	59.4
08:00 AM - 09:00 AM	59.5	61.7	59.1
09:00 AM - 10:00 AM	60.2	65.9	59.1

Leq Average 24 hrs. (dB(A)) 60.2
Lmax (dB(A)) 68.4
L90 (dB(A)) 59.8
Ldn (dB(A)) 66.7
Standard (dB(A)) 70 115
Reference Method : ISO1996-1 and 1996-2
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548
Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsunwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports_Air Noise.rpt (12:25PM)



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133611
Date Received : Nov 15, 2022
Date Reported : Nov 21, 2022
Report Number: 2496182-1

Page 1 of 1

Sample Number 22133611-5
Parameter Noise (Leq 24 hrs.)
Location รั้วหน้าโรงไฟฟ้าเดิม (Fence of Project Site) (GPS 47P 0731886, 1402471)
Measurement Date Nov 11 - Nov 12, 2022
Measurement by Jakkarin Manwicha
Sound Level meter Serial No. 734221

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	60.0	65.9	59.5
11:00 AM - 12:00 PM	60.1	62.3	59.6
12:00 PM - 01:00 PM	60.1	63.0	59.7
01:00 PM - 02:00 PM	60.6	62.9	59.9
02:00 PM - 03:00 PM	60.5	62.3	60.1
03:00 PM - 04:00 PM	60.5	62.9	60.0
04:00 PM - 05:00 PM	60.7	63.2	59.9
05:00 PM - 06:00 PM	58.6	60.9	57.8
06:00 PM - 07:00 PM	58.6	63.3	57.7
07:00 PM - 08:00 PM	58.6	61.0	57.7
08:00 PM - 09:00 PM	58.7	61.6	57.7
09:00 PM - 10:00 PM	59.6	62.3	57.7
10:00 PM - 11:00 PM	58.7	61.4	57.8
11:00 PM - 12:00 AM	58.8	61.3	58.0
12:00 AM - 01:00 AM	58.4	59.8	57.8
01:00 AM - 02:00 AM	60.1	62.3	59.1
02:00 AM - 03:00 AM	60.4	62.5	60.0
03:00 AM - 04:00 AM	60.5	62.6	59.9
04:00 AM - 05:00 AM	60.1	61.9	59.8
05:00 AM - 06:00 AM	60.1	62.5	59.6
06:00 AM - 07:00 AM	60.0	62.6	59.5
07:00 AM - 08:00 AM	59.8	64.1	59.3
08:00 AM - 09:00 AM	60.0	62.7	59.5
09:00 AM - 10:00 AM	60.0	62.9	59.4

Leq Average 24 hrs. (dB(A)) 59.8
Lmax (dB(A)) 65.9
L90 (dB(A)) 59.5
Ldn (dB(A)) 66.2
Standard (dB(A)) 70 115
Reference Method : ISO1996-1 and 1996-2
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548
Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsumwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133132
Date Received : Nov 15, 2022
Date Reported : Dec 07, 2022
Report Number : 2496160-1C2

Page 1 of 1

Sample Number 22133132-6
Parameter Noise (Leq 24 hrs.)
Location รั้วหน้าโรงไฟฟ้าเดิม (Fence of Project Site) (GPS 47P 0731886, 1402471)
Measurement Date Nov 12 - Nov 13, 2022
Measurement by Jakkarin Manwicha
Sound Level meter Serial No. 734221

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	59.9	61.6	59.5
11:00 AM - 12:00 PM	60.3	62.7	59.8
12:00 PM - 01:00 PM	60.3	61.3	60.0
01:00 PM - 02:00 PM	60.5	61.8	60.2
02:00 PM - 03:00 PM	59.4	74.4	58.9
03:00 PM - 04:00 PM	59.3	64.4	58.9
04:00 PM - 05:00 PM	59.1	60.0	58.9
05:00 PM - 06:00 PM	59.1	66.1	58.9
06:00 PM - 07:00 PM	60.2	64.6	59.3
07:00 PM - 08:00 PM	60.2	64.1	59.6
08:00 PM - 09:00 PM	60.6	67.8	59.9
09:00 PM - 10:00 PM	60.6	63.5	60.0
10:00 PM - 11:00 PM	60.7	62.9	60.0
11:00 PM - 12:00 AM	60.7	63.3	59.9
12:00 AM - 01:00 AM	59.4	62.4	58.2
01:00 AM - 02:00 AM	60.4	63.0	59.4
02:00 AM - 03:00 AM	60.2	62.0	59.1
03:00 AM - 04:00 AM	60.8	62.4	59.9
04:00 AM - 05:00 AM	59.9	63.7	59.1
05:00 AM - 06:00 AM	60.1	62.0	58.9
06:00 AM - 07:00 AM	60.9	62.3	60.3
07:00 AM - 08:00 AM	60.2	62.0	59.4
08:00 AM - 09:00 AM	59.7	60.9	59.1
09:00 AM - 10:00 AM	59.8	61.4	59.1

Leq Average 24 hrs. (dB(A)) 60.1
Lmax (dB(A)) 74.4
L90 (dB(A)) 59.4
Ldn (dB(A)) 66.7
Standard (dB(A)) 70 115
Reference Method : ISO1996-1 and 1996-2
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Technical Management

Thanita K.

Thanita Kulsumwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID: 22133132

Date Received : Nov 15, 2022

Date Reported : Dec 07, 2022

Report Number : 2496161-1C2

Page 1 of 1

Sample Number 22133132-7
Parameter Noise (Leq 24 hrs.)
Location จันทบุรีไฟฟ้าเคมี (Fence of Project Site) (GPS 47P 0731886, 1402471)
Measurement Date Nov 13 - Nov 14, 2022
Measurement by Jakkarin Manwicha
Sound Level meter Serial No. 734221

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:00 AM - 11:00 AM	60.0	62.1	59.2
11:00 AM - 12:00 PM	60.6	62.5	59.7
12:00 PM - 01:00 PM	60.5	66.5	59.5
01:00 PM - 02:00 PM	60.3	62.7	59.5
02:00 PM - 03:00 PM	59.9	63.4	59.0
03:00 PM - 04:00 PM	59.6	61.5	58.9
04:00 PM - 05:00 PM	59.6	61.3	59.0
05:00 PM - 06:00 PM	59.4	61.7	58.8
06:00 PM - 07:00 PM	59.8	61.0	59.5
07:00 PM - 08:00 PM	60.1	62.2	59.6
08:00 PM - 09:00 PM	60.2	61.9	59.8
09:00 PM - 10:00 PM	60.5	62.3	59.9
10:00 PM - 11:00 PM	60.5	62.4	60.1
11:00 PM - 12:00 AM	60.2	68.4	59.9
12:00 AM - 01:00 AM	60.5	62.3	60.0
01:00 AM - 02:00 AM	60.4	63.4	59.6
02:00 AM - 03:00 AM	60.3	62.2	59.2
03:00 AM - 04:00 AM	60.2	65.8	59.5
04:00 AM - 05:00 AM	60.1	61.2	59.7
05:00 AM - 06:00 AM	59.8	60.5	59.4
06:00 AM - 07:00 AM	60.1	61.4	59.6
07:00 AM - 08:00 AM	60.0	61.4	59.6
08:00 AM - 09:00 AM	60.8	62.2	60.0
09:00 AM - 10:00 AM	60.4	61.9	59.8

Leq Average 24 hrs. (dB(A))

60.2

Lmax (dB(A))

68.4

L90 (dB(A))

59.6

Ldn (dB(A))

66.6

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

5281-111/ EMAIL



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O : GLOW-OM-22-103

Project Name :

Project Location : Glow Phase5

Lot ID: 22133615

Date Received : Nov 15, 2022

Date Reported : Nov 21, 2022

Report Number : 2496185-1

Page 1 of 1

Sample Number 22133615-1
Parameter Noise (Leq 24 hrs.)
Location บ้านหนองพิน (GPS 47P 0729893, 1403292)
Measurement Date Nov 07 - Nov 08, 2022
Measurement by Jakkarin Manwicha
Sound Level meter Serial No. 734218

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:00 PM - 01:00 PM	58.6	83.5	52.7
01:00 PM - 02:00 PM	54.9	77.0	51.5
02:00 PM - 03:00 PM	55.0	75.5	49.9
03:00 PM - 04:00 PM	55.6	76.2	50.1
04:00 PM - 05:00 PM	56.1	86.6	50.0
05:00 PM - 06:00 PM	57.1	79.1	50.5
06:00 PM - 07:00 PM	58.5	84.7	50.9
07:00 PM - 08:00 PM	56.5	78.0	50.5
08:00 PM - 09:00 PM	53.8	73.6	49.2
09:00 PM - 10:00 PM	54.6	77.7	50.0
10:00 PM - 11:00 PM	55.0	78.4	50.7
11:00 PM - 12:00 AM	55.1	81.7	51.7
12:00 AM - 01:00 AM	53.9	74.0	51.9
01:00 AM - 02:00 AM	53.5	68.9	51.8
02:00 AM - 03:00 AM	53.8	68.5	52.3
03:00 AM - 04:00 AM	54.3	69.7	52.3
04:00 AM - 05:00 AM	54.3	68.6	52.7
05:00 AM - 06:00 AM	57.6	84.8	53.2
06:00 AM - 07:00 AM	57.9	79.3	54.1
07:00 AM - 08:00 AM	59.3	84.3	55.7
08:00 AM - 09:00 AM	61.1	83.3	55.2
09:00 AM - 10:00 AM	56.7	73.7	53.0
10:00 AM - 11:00 AM	57.8	76.5	53.6
11:00 AM - 12:00 PM	57.3	74.7	53.4

Leq Average 24 hrs. (dB(A))

56.7

Lmax (dB(A))

86.6

L90 (dB(A))

51.8

Ldn (dB(A))

62.1

Standard (dB(A))

70

115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports_Air Noise.rpt (12:16PM)



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED

11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O : GLOW-OM-22-103

Project Name :

Project Location : Glow Phase5

Lot ID: 22133615

Date Received : Nov 15, 2022

Date Reported : Nov 21, 2022

Report Number: 2496186-1

Page 1 of 1

Sample Number 22133615-2
Parameter Noise (Leq 24 hrs.)
Location บ้านหนองเพน (GPS 47P 0729893, 1403292)
Measurement Date Nov 08 - Nov 09, 2022
Measurement by Jakkarin Manwicha
Sound Level meter Serial No. 734218

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:00 PM - 01:00 PM	60.1	75.6	52.3
01:00 PM - 02:00 PM	55.0	69.9	51.3
02:00 PM - 03:00 PM	55.2	77.7	50.1
03:00 PM - 04:00 PM	55.3	77.6	49.6
04:00 PM - 05:00 PM	56.6	80.3	49.2
05:00 PM - 06:00 PM	60.2	89.6	50.8
06:00 PM - 07:00 PM	58.3	82.9	50.4
07:00 PM - 08:00 PM	57.1	77.6	52.0
08:00 PM - 09:00 PM	56.1	81.0	51.8
09:00 PM - 10:00 PM	54.5	76.7	51.0
10:00 PM - 11:00 PM	55.4	80.1	51.0
11:00 PM - 12:00 AM	55.2	82.9	51.4
12:00 AM - 01:00 AM	53.3	66.0	51.6
01:00 AM - 02:00 AM	52.6	64.8	51.2
02:00 AM - 03:00 AM	53.2	70.1	51.9
03:00 AM - 04:00 AM	53.7	73.8	52.0
04:00 AM - 05:00 AM	54.8	65.5	53.0
05:00 AM - 06:00 AM	55.1	80.2	52.5
06:00 AM - 07:00 AM	58.5	82.4	53.9
07:00 AM - 08:00 AM	60.6	77.5	56.3
08:00 AM - 09:00 AM	66.8	90.1	55.6
09:00 AM - 10:00 AM	58.6	75.2	54.3
10:00 AM - 11:00 AM	59.0	78.5	53.7
11:00 AM - 12:00 PM	57.8	78.4	53.2

Leq Average 24 hrs. (dB(A)) 58.3
Lmax (dB(A)) 90.1
L90 (dB(A)) 51.8
Ldn (dB(A)) 62.4
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanitak.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

S:\Reports_Air Noise rpt (12:16PM)

19584-21/ EMAIL



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED

11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O : GLOW-OM-22-103

Project Name :

Project Location : Glow Phase5

Lot ID: 22133615

Date Received : Nov 15, 2022

Date Reported : Nov 21, 2022

Report Number: 2496187-1

Page 1 of 1

Sample Number 22133615-3
Parameter Noise (Leq 24 hrs.)
Location บ้านหนองเพน (GPS 47P 0729893, 1403292)
Measurement Date Nov 09 - Nov 10, 2022
Measurement by Jakkarin Manwicha
Sound Level meter Serial No. 734218

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:00 PM - 01:00 PM	61.4	80.2	52.6
01:00 PM - 02:00 PM	54.9	72.7	50.2
02:00 PM - 03:00 PM	56.0	78.5	49.2
03:00 PM - 04:00 PM	56.5	82.9	49.1
04:00 PM - 05:00 PM	55.9	72.3	50.1
05:00 PM - 06:00 PM	56.6	75.7	50.3
06:00 PM - 07:00 PM	56.8	82.1	49.7
07:00 PM - 08:00 PM	56.7	80.2	49.3
08:00 PM - 09:00 PM	55.4	78.1	49.1
09:00 PM - 10:00 PM	54.9	80.7	50.1
10:00 PM - 11:00 PM	53.3	72.5	50.3
11:00 PM - 12:00 AM	53.6	77.5	49.8
12:00 AM - 01:00 AM	52.3	69.8	50.1
01:00 AM - 02:00 AM	51.1	63.1	49.7
02:00 AM - 03:00 AM	52.6	61.0	51.2
03:00 AM - 04:00 AM	52.6	68.4	50.7
04:00 AM - 05:00 AM	51.7	70.1	50.1
05:00 AM - 06:00 AM	54.4	82.7	50.8
06:00 AM - 07:00 AM	57.2	81.4	53.0
07:00 AM - 08:00 AM	59.7	77.8	55.5
08:00 AM - 09:00 AM	62.6	82.8	56.2
09:00 AM - 10:00 AM	59.2	79.4	54.7
10:00 AM - 11:00 AM	58.9	72.6	54.3
11:00 AM - 12:00 PM	58.2	77.4	53.8

Leq Average 24 hrs. (dB(A)) 57.0
Lmax (dB(A)) 82.9
L90 (dB(A)) 50.2
Ldn (dB(A)) 61.0
Standard (dB(A)) 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanitak.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports_Air Noise rpt (12:16PM)



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133615
Date Received : Nov 15, 2022
Date Reported : Nov 21, 2022
Report Number: 2496188-1

Page 1 of 1

Sample Number 22133615-4
Parameter Noise (Leq 24 hrs.)
Location บ้านหนองเพน(GPS 47P 0729893, 1403292)
Measurement Date Nov 10 - Nov 11, 2022
Measurement by Jakkarin Manwicha
Sound Level meter Serial No. 734218

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:00 PM - 01:00 PM	60.6	75.6	55.0
01:00 PM - 02:00 PM	57.4	86.0	53.4
02:00 PM - 03:00 PM	57.4	72.1	52.6
03:00 PM - 04:00 PM	55.6	73.7	50.7
04:00 PM - 05:00 PM	57.0	80.9	49.8
05:00 PM - 06:00 PM	56.6	72.4	50.7
06:00 PM - 07:00 PM	57.2	82.6	50.2
07:00 PM - 08:00 PM	60.9	78.8	50.0
08:00 PM - 09:00 PM	58.2	85.5	48.8
09:00 PM - 10:00 PM	54.1	77.9	48.5
10:00 PM - 11:00 PM	54.7	80.9	50.7
11:00 PM - 12:00 AM	54.9	80.8	50.2
12:00 AM - 01:00 AM	55.1	85.0	50.8
01:00 AM - 02:00 AM	53.1	83.5	50.2
02:00 AM - 03:00 AM	52.5	68.6	50.8
03:00 AM - 04:00 AM	53.2	81.1	50.7
04:00 AM - 05:00 AM	52.6	68.2	51.2
05:00 AM - 06:00 AM	52.6	71.5	51.0
06:00 AM - 07:00 AM	55.3	80.3	51.5
07:00 AM - 08:00 AM	57.9	76.6	52.7
08:00 AM - 09:00 AM	59.6	85.2	53.6
09:00 AM - 10:00 AM	56.4	75.2	52.1
10:00 AM - 11:00 AM	56.4	72.1	52.6
11:00 AM - 12:00 PM	57.0	76.1	51.7

Leq Average 24 hrs. (dB(A)) 56.8
Lmax (dB(A)) 86.0
L90 (dB(A)) 50.8
Ldn (dB(A)) 61.2
Standard (dB(A)) 70
Reference Method : ISO1996-1 and 1996-2
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548
Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phrakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

S:\Reports_Air Noise.rpt (12:16PM)

19584-21/ EMAIL



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133615
Date Received : Nov 15, 2022
Date Reported : Nov 21, 2022
Report Number: 2496189-1

Page 1 of 1

Sample Number 22133615-5
Parameter Noise (Leq 24 hrs.)
Location บ้านหนองเพน(GPS 47P 0729893, 1403292)
Measurement Date Nov 11 - Nov 12, 2022
Measurement by Jakkarin Manwicha
Sound Level meter Serial No. 734218

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:00 PM - 01:00 PM	57.4	80.3	52.1
01:00 PM - 02:00 PM	56.2	91.4	51.1
02:00 PM - 03:00 PM	53.3	69.7	48.5
03:00 PM - 04:00 PM	68.3	81.1	50.3
04:00 PM - 05:00 PM	60.1	84.7	50.3
05:00 PM - 06:00 PM	57.4	76.3	51.8
06:00 PM - 07:00 PM	58.2	82.9	52.0
07:00 PM - 08:00 PM	60.4	87.4	51.3
08:00 PM - 09:00 PM	58.6	86.9	51.4
09:00 PM - 10:00 PM	54.0	79.1	50.0
10:00 PM - 11:00 PM	53.9	72.0	50.0
11:00 PM - 12:00 AM	50.9	76.5	47.3
12:00 AM - 01:00 AM	49.8	78.1	46.5
01:00 AM - 02:00 AM	49.3	63.7	47.3
02:00 AM - 03:00 AM	50.6	70.6	46.2
03:00 AM - 04:00 AM	49.8	62.5	46.8
04:00 AM - 05:00 AM	53.0	70.0	51.6
05:00 AM - 06:00 AM	53.3	82.7	50.6
06:00 AM - 07:00 AM	57.9	83.3	51.2
07:00 AM - 08:00 AM	56.8	76.3	52.0
08:00 AM - 09:00 AM	58.1	81.7	52.1
09:00 AM - 10:00 AM	58.7	87.4	52.3
10:00 AM - 11:00 AM	57.5	79.7	52.3
11:00 AM - 12:00 PM	56.3	75.0	52.0

Leq Average 24 hrs. (dB(A)) 58.5
Lmax (dB(A)) 91.4
L90 (dB(A)) 51.1
Ldn (dB(A)) 61.4
Standard (dB(A)) 70
Reference Method : ISO1996-1 and 1996-2
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548
Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Phrakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

S:\Reports_Air Noise.rpt (12:16PM)

19584-21/ EMAIL



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133132
Date Received : Nov 15, 2022
Date Reported : Dec 07, 2022
Report Number : 2496167-1C2

Page 1 of 1

Sample Number : 22133132-13
Parameter : Noise (Leq 24 hrs.)
Location : บ้านหนองพิน (GPS 47P 0729893, 1403292)
Measurement Date : Nov 12 - Nov 13, 2022
Measurement by : Jakkarin Manwicha
Sound Level meter : Serial No. 734218

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:00 PM - 01:00 PM	55.0	74.5	49.9
01:00 PM - 02:00 PM	55.2	75.0	50.5
02:00 PM - 03:00 PM	54.3	72.0	50.0
03:00 PM - 04:00 PM	54.6	82.4	49.3
04:00 PM - 05:00 PM	54.8	73.5	49.4
05:00 PM - 06:00 PM	58.9	82.0	50.5
06:00 PM - 07:00 PM	67.5	83.9	51.0
07:00 PM - 08:00 PM	55.4	77.1	50.7
08:00 PM - 09:00 PM	55.0	73.4	52.0
09:00 PM - 10:00 PM	54.6	75.9	51.5
10:00 PM - 11:00 PM	54.2	70.9	51.9
11:00 PM - 12:00 AM	53.6	73.5	50.4
12:00 AM - 01:00 AM	52.6	63.8	49.8
01:00 AM - 02:00 AM	54.5	70.0	52.1
02:00 AM - 03:00 AM	53.3	67.1	51.8
03:00 AM - 04:00 AM	53.3	66.3	51.8
04:00 AM - 05:00 AM	55.0	72.1	52.4
05:00 AM - 06:00 AM	55.4	80.0	52.7
06:00 AM - 07:00 AM	56.5	82.1	52.9
07:00 AM - 08:00 AM	59.2	80.8	54.9
08:00 AM - 09:00 AM	62.8	89.1	55.1
09:00 AM - 10:00 AM	57.1	77.5	52.3
10:00 AM - 11:00 AM	57.1	84.7	50.6
11:00 AM - 12:00 PM	57.3	81.9	49.6

Leq Average 24 hrs. (dB(A)) : 58.1
Lmax (dB(A)) : 89.1
L90 (dB(A)) : 51.0
Ldn (dB(A)) : 62.0
Standard (dB(A)) : 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Technical Management

Thanita K.

Thanita Kulsunwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556



Analysis / Test Report



TESTING
No.0042

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 22133132
Date Received : Nov 15, 2022
Date Reported : Dec 07, 2022
Report Number : 2496168-1C2

Page 1 of 1

Sample Number : 22133132-14
Parameter : Noise (Leq 24 hrs.)
Location : บ้านหนองพิน (GPS 47P 0729893, 1403292)
Measurement Date : Nov 13 - Nov 14, 2022
Measurement by : Jakkarin Manwicha
Sound Level meter : Serial No. 734218

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
12:00 PM - 01:00 PM	61.3	78.0	52.0
01:00 PM - 02:00 PM	56.0	75.1	49.7
02:00 PM - 03:00 PM	56.2	81.5	49.1
03:00 PM - 04:00 PM	56.1	79.6	48.7
04:00 PM - 05:00 PM	54.8	77.5	48.5
05:00 PM - 06:00 PM	54.3	80.1	49.5
06:00 PM - 07:00 PM	52.7	71.9	49.7
07:00 PM - 08:00 PM	53.0	76.9	49.2
08:00 PM - 09:00 PM	51.7	69.2	49.5
09:00 PM - 10:00 PM	50.5	62.5	49.1
10:00 PM - 11:00 PM	52.0	60.4	50.6
11:00 PM - 12:00 AM	52.0	67.8	50.1
12:00 AM - 01:00 AM	51.1	69.5	49.5
01:00 AM - 02:00 AM	53.8	82.1	50.2
02:00 AM - 03:00 AM	56.6	80.8	52.4
03:00 AM - 04:00 AM	59.1	77.2	54.9
04:00 AM - 05:00 AM	62.0	82.2	55.6
05:00 AM - 06:00 AM	58.6	78.8	54.1
06:00 AM - 07:00 AM	58.3	72.0	53.7
07:00 AM - 08:00 AM	57.6	76.8	53.2
08:00 AM - 09:00 AM	60.0	75.0	54.4
09:00 AM - 10:00 AM	56.8	85.4	52.8
10:00 AM - 11:00 AM	56.8	71.5	52.0
11:00 AM - 12:00 PM	55.0	73.1	50.1

Leq Average 24 hrs. (dB(A)) : 56.8
Lmax (dB(A)) : 85.4
L90 (dB(A)) : 50.1
Ldn (dB(A)) : 63.7
Standard (dB(A)) : 70 115

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระดับเสียงโดยทั่วไป
2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดค่าระดับเสียงการรบกวน และระดับเสียงที่เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2548

Technical Management

Thanita K.

Thanita Kulsunwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556

ภาคผนวก ค-8

ใบรายงานผลการติดตามตรวจสอบความร้อนในสถานที่ทำงาน



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID: 2296616

Date Received : Sep 27, 2022

Date Reported : Sep 30, 2022

Report Number: 2397530-1

Page 2 of 4

Sample Number 2296616-2
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Sep 19, 2022
Measurement by Supot Salamteh
Location ปฏบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
Combustion Turbine A	120	26.9	24.7	32.0	31.8
Average (WBGT)		26.9			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

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

Technical Management

Supot S
Supot Salamteh
Section Head

Approved by

Wichan Ch
Wichan Choonharat
Assistant Manager

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21 / EMAIL

S:\Reports_Air Heat.rpt (12:47PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID: 2296616

Date Received : Sep 27, 2022

Date Reported : Sep 30, 2022

Report Number: 2397530-1

Page 3 of 4

Sample Number 2296616-3
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Sep 19, 2022
Measurement by Supot Salamteh
Location ปฏบัติงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
Combustion Turbine B	120	27.9	25.6	33.4	33.3
Average (WBGT)		27.9			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

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

Technical Management

Supot S
Supot Salamteh
Section Head

Approved by

Wichan Ch
Wichan Choonharat
Assistant Manager

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21 / EMAIL

S:\Reports_Air Heat.rpt (12:47PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2296616
Date Received : Sep 27, 2022
Date Reported : Sep 30, 2022
Report Number: 2397530-1

Page 4 of 4

Sample Number	2296616-4				
Parameter	Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)				
Measurement Date	Sep 19, 2022				
Measurement by	Supot Salamteh				
Location	ปล่องโรงงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แผนก : -)				
Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
Steam Turbine Drainage Skid	120	27.7	25.6	32.6	32.4
Average (WBGT)		27.7			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

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

Technical Management

Supot S.

Supot Salamteh
Section Head

Approved by

Wichan Ch.

Wichan Choonharat
Assistant Manager

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand PHONE +66 0 2760 3000 FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase 5

Lot ID: 22126364
Date Received : Oct 17, 2022
Date Reported : Oct 19, 2022
Report Number: 2463675-1

Page 1 of 1

Sample Number	22126364-1				
Parameter	Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)				
Measurement Date	Oct 17, 2022				
Measurement by	Supot Salamteh				
Location	ปล่องโรงงาน 1 พื้นที่ (ชื่อ-นามสกุล ผู้ปฏิบัติงาน : - แขนง : -)				
Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
IP Drum HRSG 27.6 m	120	24.7	22.2	30.4	30.2
Average (WBGT)		24.7			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

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

Technical Management

Supot S.

Supot Salamteh
Section Head

Approved by

Wichan Ch.

Wichan Choonharat
Assistant Manager

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand PHONE +66 0 2760 3000 FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

ภาคผนวก ค-9

ใบรายงานผลการติดตามตรวจสอบความเข้มแสงสว่างในในสถานที่ปฏิบัติงาน



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID: 2296633

Date Received : Sep 29, 2022

Date Reported : Oct 07, 2022

Report Number : 2455734-1

Page 1 of 1

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)		Guideline Limit		Comment
					Spot	Average	Spot/Min	Average	
Spot - CT Power Control Center Socket Outlet									
1	2296633-1	19 Sep 2022	Day time	1	283	-	200-300	-	Pass
1	2296633-2	19 Sep 2022	Night time	1	276	-	200-300	-	Pass
Spot - Fuel Gas Equipment Skid :									
2	2296633-3	19 Sep 2022	Day time	1	11,968	-	200-300	-	Pass
2	2296633-4	19 Sep 2022	Day time	2	11,992	-	2,000		
2	2296633-5	19 Sep 2022	Day time	3	11,940	-	600		
2	2296633-6	19 Sep 2022	Night time	1	266	-	200-300	-	Pass
Spot - CEMs Enclosure :									
3	2296633-7	19 Sep 2022	Day time	1	355	-	200-300	-	Pass
3	2296633-8	19 Sep 2022	Night time	1	325	-	200-300	-	Pass
Spot - Steam Jet Ejector Skid :									
4	2296633-9	19 Sep 2022	Day time	1	975	-	200-300	-	Pass
4	2296633-10	19 Sep 2022	Night time	1	450	-	200-300	-	Pass
Spot - Steam Turbine Drainage Skid :									
5	2296633-11	19 Sep 2022	Day time	1	601	-	200-300	-	Pass
5	2296633-12	19 Sep 2022	Night time	1	330	-	200-300	-	Pass
Spot - Steam Turbine Oil Middle :									
6	2296633-13	19 Sep 2022	Day time	1	220	-	200-300	-	Pass
6	2296633-14	19 Sep 2022	Night time	1	215	-	200-300	-	Pass

Measurement by : Supot Salamteh Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

Supot Salamteh
Section Head

Approved by

Wichan Choonharat
Assistant Manager

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand | PHONE +66 0 2760 3000 | FAX +66 0 2760 3197
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

LIFE SCIENCES

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

ภาคผนวก ค-10

ใบรายงานผลการติดตามตรวจสอบระดับเสียงเฉลี่ยตลอดระยะเวลาการทำงาน
(Leq 8 hrs)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2296620
Date Received : Sep 26, 2022
Date Reported : Sep 29, 2022
Report Number: 2449391-1

Page 1 of 1

Sample Number	2296620-1
Parameter	Noise (Leq 8 hrs.)
Location	Gas Turbine Closure
Measurement Date	Sep 19, 2022
Measurement by	Santi Chaichana

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:16 AM - 10:16 AM	83.7	86.5	83.3
10:16 AM - 11:16 AM	83.8	85.3	83.4
11:16 AM - 12:16 PM	83.3	84.9	83.0
12:16 PM - 01:16 PM	83.5	85.0	83.2
01:16 PM - 02:16 PM	83.5	85.3	83.2
02:16 PM - 03:16 PM	83.8	85.6	83.4
03:16 PM - 04:16 PM	84.1	86.9	83.6
04:16 PM - 05:16 PM	83.8	85.8	83.3

Leq Average 8 hrs. (dB(A)) 83.7
Lmax (dB(A)) 86.9
Standard (dB(A)) 90
Reference Method : ISO1996-1 and 1996-2
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรฐานการคุ้มครองความปลอดภัย
ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2296620
Date Received : Sep 26, 2022
Date Reported : Sep 29, 2022
Report Number: 2449392-1

Page 1 of 1

Sample Number	2296620-2
Parameter	Noise (Leq 8 hrs.)
Location	Gas Turbine Closure
Measurement Date	Sep 20, 2022
Measurement by	Santi Chaichana

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:16 AM - 10:16 AM	83.6	85.1	83.3
10:16 AM - 11:16 AM	83.7	85.3	83.3
11:16 AM - 12:16 PM	84.1	85.8	83.8
12:16 PM - 01:16 PM	83.8	85.3	83.5
01:16 PM - 02:16 PM	83.8	84.8	83.5
02:16 PM - 03:16 PM	83.7	84.8	83.4
03:16 PM - 04:16 PM	83.7	85.3	83.4
04:16 PM - 05:16 PM	83.7	85.2	83.3

Leq Average 8 hrs. (dB(A)) 83.8
Lmax (dB(A)) 85.8
Standard (dB(A)) 90
Reference Method : ISO1996-1 and 1996-2
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรฐานการคุ้มครองความปลอดภัย
ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

S:\Reports_Air Noise.rpt (8:22AM)

19584-21/ EMAIL

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports_Air Noise.rpt (8:22AM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID: 2296620

Date Received : Sep 26, 2022

Date Reported : Sep 29, 2022

Report Number: 2449393-1

Page 1 of 1

Sample Number	2296620-3
Parameter	Noise (Leq 8 hrs.)
Location	Gas Turbine Closure
Measurement Date	Sep 21, 2022
Measurement by	Santi Chaichana

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:16 AM - 10:16 AM	83.7	84.6	83.4
10:16 AM - 11:16 AM	83.6	84.8	83.3
11:16 AM - 12:16 PM	83.4	84.5	83.1
12:16 PM - 01:16 PM	83.2	85.1	83.0
01:16 PM - 02:16 PM	83.3	84.7	83.0
02:16 PM - 03:16 PM	83.3	84.2	83.1
03:16 PM - 04:16 PM	83.4	84.5	83.1
04:16 PM - 05:16 PM	83.6	84.9	83.3

Leq Average 8 hrs. (dB(A))

83.4

Lmax (dB(A))

85.1

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรฐานการคุ้มครองความปลอดภัย

ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID: 2296620

Date Received : Sep 26, 2022

Date Reported : Sep 29, 2022

Report Number: 2449394-1

Page 1 of 1

Sample Number	2296620-4
Parameter	Noise (Leq 8 hrs.)
Location	Gas Turbine Closure
Measurement Date	Sep 22, 2022
Measurement by	Santi Chaichana

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:16 AM - 10:16 AM	83.4	84.8	83.1
10:16 AM - 11:16 AM	83.4	84.7	83.2
11:16 AM - 12:16 PM	83.3	84.2	83.1
12:16 PM - 01:16 PM	83.2	84.3	82.9
01:16 PM - 02:16 PM	83.3	91.2	83.0
02:16 PM - 03:16 PM	83.3	84.1	83.1
03:16 PM - 04:16 PM	83.4	90.4	83.1
04:16 PM - 05:16 PM	83.4	84.3	83.2

Leq Average 8 hrs. (dB(A))

83.3

Lmax (dB(A))

91.2

Standard (dB(A))

90

140

Reference Method : ISO1996-1 and 1996-2

Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรฐานการคุ้มครองความปลอดภัย

ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖

Technical Management

Thanita K.

Thanita Kulsurwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports\Air Noise.rpt (8:22AM)

Technical Management

Thanita K.

Thanita Kulsurwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports\Air Noise.rpt (8:22AM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :
Project Name :
Project Location : Glow Phase5

Lot ID: 2296620
Date Received : Sep 26, 2022
Date Reported : Sep 29, 2022
Report Number: 2449395-1

Page 1 of 1

Sample Number 2296620-5
Parameter Noise (Leq 8 hrs.)
Location Gas Turbine Closure
Measurement Date Sep 23, 2022
Measurement by Santi Chaichana

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:16 AM - 10:16 AM	83.5	84.8	83.1
10:16 AM - 11:16 AM	83.4	85.0	83.1
11:16 AM - 12:16 PM	83.4	84.6	83.1
12:16 PM - 01:16 PM	83.5	84.7	83.2
01:16 PM - 02:16 PM	83.5	84.7	83.2
02:16 PM - 03:16 PM	83.4	84.7	83.1
03:16 PM - 04:16 PM	83.3	84.4	83.0
04:16 PM - 05:16 PM	83.4	84.6	83.1

Leq Average 8 hrs. (dB(A)) 83.4
Lmax (dB(A)) 85.0
Standard (dB(A)) 90
Reference Method : ISO1996-1 and 1996-2
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรฐานการคุ้มครองความปลอดภัย
ในการประกอบกิจการโรงงานเกี่ยวกับสถานะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133618
Date Received : Nov 15, 2022
Date Reported : Nov 21, 2022
Report Number: 2496192-1

Page 1 of 1

Sample Number 22133618-1
Parameter Noise (Leq 8 hrs.)
Location Gas Turbine Closure
Measurement Date Nov 07, 2022
Measurement by Jakkarin Manwicha

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	83.5	85.1	83.2
10:00 AM - 11:00 AM	83.5	84.5	83.3
11:00 AM - 12:00 PM	83.4	84.7	83.2
12:00 PM - 01:00 PM	83.3	84.5	83.0
01:00 PM - 02:00 PM	83.4	84.4	83.1
02:00 PM - 03:00 PM	83.4	84.6	83.1
03:00 PM - 04:00 PM	83.5	84.7	83.2
04:00 PM - 05:00 PM	83.3	84.4	83.1

Leq Average 8 hrs. (dB(A)) 83.4
Lmax (dB(A)) 85.1
Standard (dB(A)) 90
Reference Method : ISO1996-1 and 1996-2
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรฐานการคุ้มครองความปลอดภัย
ในการประกอบกิจการโรงงานเกี่ยวกับสถานะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖

Technical Management

Thanita K.
Thanita Kulsumwong
Scientist (4)

Approved by

Supot S.
Supot Salamtch
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

S:\Reports\Air Noise.rpt (8:23AM)

19584-21/ EMAIL

Technical Management

Thanita K.
Thanita Kulsumwong
Scientist (4)

Approved by

Supot S.
Supot Salamtch
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

S:\Reports\Air Noise.rpt (12:06PM)

19584-21/ EMAIL



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133618
Date Received : Nov 15, 2022
Date Reported : Nov 21, 2022
Report Number: 2496193-1

Page 1 of 1

Sample Number 22133618-2
Parameter Noise (Leq 8 hrs.)
Location Gas Turbine Closure
Measurement Date Nov 08, 2022
Measurement by Jakkarin Manwicha

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	83.4	86.4	83.1
10:00 AM - 11:00 AM	83.5	84.8	83.2
11:00 AM - 12:00 PM	83.5	85.4	83.2
12:00 PM - 01:00 PM	83.4	84.3	83.2
01:00 PM - 02:00 PM	83.3	84.3	83.1
02:00 PM - 03:00 PM	83.5	85.1	83.1
03:00 PM - 04:00 PM	83.6	84.9	83.3
04:00 PM - 05:00 PM	83.6	84.7	83.3

Leq Average 8 hrs. (dB(A)) 83.5
Lmax (dB(A)) 86.4
Standard (dB(A)) 90
Reference Method : ISO1996-1 and 1996-2
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรฐานการคุ้มครองความปลอดภัย
ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๔๖



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133618
Date Received : Nov 15, 2022
Date Reported : Nov 21, 2022
Report Number: 2496194-1

Page 1 of 1

Sample Number 22133618-3
Parameter Noise (Leq 8 hrs.)
Location Gas Turbine Closure
Measurement Date Nov 09, 2022
Measurement by Jakkarin Manwicha

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	83.4	84.5	83.1
10:00 AM - 11:00 AM	83.4	90.3	83.1
11:00 AM - 12:00 PM	83.3	89.9	83.1
12:00 PM - 01:00 PM	83.3	84.2	83.0
01:00 PM - 02:00 PM	83.4	84.7	83.1
02:00 PM - 03:00 PM	83.4	84.5	83.1
03:00 PM - 04:00 PM	83.4	84.5	83.1
04:00 PM - 05:00 PM	83.3	84.5	83.1

Leq Average 8 hrs. (dB(A)) 83.4
Lmax (dB(A)) 90.3
Standard (dB(A)) 90
Reference Method : ISO1996-1 and 1996-2
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรฐานการคุ้มครองความปลอดภัย
ในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.๒๕๔๖

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamtch
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

S:\Reports_L_Air Noise.rpt (12:06PM)

19584-21/ EMAIL

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamtch
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand PHONE +66 0 3304 8555 FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

19584-21/ EMAIL

S:\Reports_L_Air Noise.rpt (12:06PM)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133618
Date Received : Nov 15, 2022
Date Reported : Nov 21, 2022
Report Number: 2496195-1

Page 1 of 1

Sample Number : 22133618-4
Parameter : Noise (Leq 8 hrs.)
Location : Gas Turbine Closure
Measurement Date : Nov 10, 2022
Measurement by : Jakkarin Manwicha

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	83.4	84.4	83.1
10:00 AM - 11:00 AM	83.6	84.9	83.2
11:00 AM - 12:00 PM	83.5	85.1	83.2
12:00 PM - 01:00 PM	84.1	85.7	83.5
01:00 PM - 02:00 PM	86.8	88.1	84.7
02:00 PM - 03:00 PM	84.3	87.6	82.9
03:00 PM - 04:00 PM	83.1	83.9	82.9
04:00 PM - 05:00 PM	83.2	84.3	83.0

Leq Average 8 hrs. (dB(A)) : 84.2
Lmax (dB(A)) : 88.1
Standard (dB(A)) : 90
Reference Method : ISO1996-1 and 1996-2
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัยในการประกอบกิจการโรงงานเกี่ยวกับสถานะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150
P/O : GLOW-OM-22-103
Project Name :
Project Location : Glow Phase5

Lot ID: 22133618
Date Received : Nov 15, 2022
Date Reported : Nov 21, 2022
Report Number: 2496196-1

Page 1 of 1

Sample Number : 22133618-5
Parameter : Noise (Leq 8 hrs.)
Location : Gas Turbine Closure
Measurement Date : Nov 11, 2022
Measurement by : Jakkarin Manwicha

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:00 AM - 10:00 AM	83.2	84.6	83.0
10:00 AM - 11:00 AM	83.1	84.0	82.9
11:00 AM - 12:00 PM	83.0	84.0	82.8
12:00 PM - 01:00 PM	83.0	83.8	82.7
01:00 PM - 02:00 PM	83.0	83.9	82.8
02:00 PM - 03:00 PM	83.0	84.0	82.8
03:00 PM - 04:00 PM	83.1	84.0	82.9
04:00 PM - 05:00 PM	83.3	84.4	83.1

Leq Average 8 hrs. (dB(A)) : 83.1
Lmax (dB(A)) : 84.6
Standard (dB(A)) : 90
Reference Method : ISO1996-1 and 1996-2
Standard : ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรการคุ้มครองความปลอดภัยในการประกอบกิจการโรงงานเกี่ยวกับสถานะแวดล้อมในการทำงาน พ.ศ.๒๕๕๖

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Technical Management

Thanita K.

Thanita Kulsuriwong
Scientist (4)

Approved by

Supot S.

Supot Salamteh
Section Head

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand | PHONE +66 0 3304 8555 | FAX +66 0 3304 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

Life Sciences

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

ภาคผนวก ค-11

ใบรายงานผลการติดตามตรวจสอบระดับเสียงเฉลี่ยตลอดระยะเวลาการทำงาน
(TWA)



Analysis / Test Report

Client : GLOW ENERGY PUBLIC COMPANY LIMITED
11, I-5 Road, Map Ta Phut, Muang, Rayong Thailand 21150

P/O :

Project Name :

Project Location : Glow Phase5

Lot ID: 2296625

Date Received : Sep 26, 2022

Date Reported : Sep 29, 2022

Report Number : 2397539-1

Page 1 of 1

Sample Number	2296625-1
Sampled Date	Sep 19, 2022
Sample Description	Noise Dose (12 hrs.)
Location	พนักงานประจำ Phase 5
Personal Sampling	คุณธนศ เกตุแก้ว
Date Analysis Commenced	Sep 28, 2022

Analyte	Sampled Date/time	Unit	LOD	LOQ (LOR)	Result	Guideline Limit	Method	Guideline	Testing Location
Air Testing									
Noise Dose (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	%	-	-	28.2	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
Noise Dose (8 hrs.)	07:00 AM - 07:00 PM	%	-	1	26.9	No Standard	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (12 hrs.) (Calculated from Lavg)	07:00 AM - 07:00 PM	dB(A)	-	-	77.5	83*	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok
TWA (8 hrs.)	07:00 AM - 07:00 PM	dB(A)	-	-	79.3	85	MOL, Department Labour Protection and Welfare (B.E.2561)	MOL	Bangkok

Guideline :

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

Sampled By : Supot Salamteh

Remark :

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

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

Wichan Choonharat

Wichan Choonharat
Assistant Manager