

ภาคผนวก ค

ใบรับรองผลการตรวจวิเคราะห์คุณภาพสิ่งแวดล้อม

ภาคผนวก ค-1

คุณภาพอากาศในบรรยากาศ



Analysis / Test Report



Client : Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasei, Pluak Daeng, Rayong
Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0042
Lot ID: 2345410
Date Received : May 29, 2023
Date Reported : Jun 09, 2023
Report Number : 2630854-1C6

Page 1 of 1

Sample Description	Air Quality	Location	Date Analysis Commenced	Condition of Sample	Sampled Date	Total Suspended Particulate (mg/m3)	Particulate Matter (PM-10) (mg/m3)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
Sample Number	Sampled Date								
2345410-1	May 16 - May 17, 2023					0.057	0.029	756	31
2345410-2	May 17 - May 18, 2023					0.048	0.024	756	30
2345410-3	May 18 - May 19, 2023					0.054	0.027	756	30
2345410-4	May 19 - May 20, 2023					0.056	0.028	756	31
2345410-5	May 20 - May 21, 2023					0.053	0.027	756	31
2345410-6	May 21 - May 22, 2023					0.044	0.028	756	32
2345410-7	May 22 - May 23, 2023					0.057	0.027	756	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 : Jaradrawee Srinuka

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Analysis / Test Report



Client : Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasei, Pluak Daeng, Rayong
Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0042
Lot ID: 2345410
Date Received : May 29, 2023
Date Reported : Jun 09, 2023
Report Number : 2630854-2C6

Page 1 of 1

Sample Description	Air Quality	Location	Date Analysis Commenced	Condition of Sample	Sampled Date	Total Suspended Particulate (mg/m3)	Particulate Matter (PM-10) (mg/m3)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
Sample Number	Sampled Date								
2345410-8	May 16 - May 17, 2023					0.052	0.035	756	31
2345410-9	May 17 - May 18, 2023					0.061	0.044	756	30
2345410-10	May 18 - May 19, 2023					0.071	0.052	756	30
2345410-11	May 19 - May 20, 2023					0.062	0.062	756	31
2345410-12	May 20 - May 21, 2023					0.030	0.026	756	31
2345410-13	May 21 - May 22, 2023					0.056	0.047	756	32
2345410-14	May 22 - May 23, 2023					0.071	0.056	756	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 : Jaradrawee Srinuka

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Analysis / Test Report



Client : Gulf T54 Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phrak Daeng, Rayong
Thailand 21140

P/O : GTS4-4210500514

Project Name : Monitoring EIA

Project Location : GTS4

TESTING
No.0042

Lot ID: 2345410

Date Received : May 29, 2023

Date Reported : Jun 09, 2023

Report Number : 2630854-3C6

Page 1 of 1

Sample Description	Air Quality	Location	Date Analysis Commenced	Condition of Sample	Sampled Date	Total Suspended Particulate (mg/m ³)	Particulate Matter (PM-10) (mg/m ³)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
Sample Number	Sampled Date								
2345410-15	May 16 - May 17, 2023					0.066	0.029	756	31
2345410-16	May 17 - May 18, 2023					0.057	0.024	756	30
2345410-17	May 18 - May 19, 2023					0.068	0.026	756	30
2345410-18	May 19 - May 20, 2023					0.066	0.027	756	31
2345410-19	May 20 - May 21, 2023					0.060	0.025	756	31
2345410-20	May 21 - May 22, 2023					0.075	0.028	756	32
2345410-21	May 22 - May 23, 2023					0.080	0.040	756	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 : Jaradrawee Sruksa

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Analysis / Test Report



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Thailand 21140

P/O : GTS4-4210500514

Project Name : Monitoring EIA

Project Location : GTS4

TESTING
No.0042

Lot ID: 2345410

Date Received : May 29, 2023

Date Reported : Jun 09, 2023

Report Number : 2630854-4C6

Page 1 of 1

Sample Description	Air Quality	Location	Date Analysis Commenced	Condition of Sample	Sampled Date	Total Suspended Particulate (mg/m ³)	Particulate Matter (PM-10) (mg/m ³)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
Sample Number	Sampled Date								
2345410-22	May 16 - May 17, 2023					0.055	0.042	756	31
2345410-23	May 17 - May 18, 2023					0.049	0.045	756	30
2345410-24	May 18 - May 19, 2023					0.052	0.038	756	30
2345410-25	May 19 - May 20, 2023					0.053	0.038	756	31
2345410-26	May 20 - May 21, 2023					0.048	0.033	756	31
2345410-27	May 21 - May 22, 2023					0.054	0.034	756	32
2345410-28	May 22 - May 23, 2023					0.046	0.040	756	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 : Jaradrawee Sruksa

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Analysis / Test Report

Client : Gulf TSC Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasil, Pluak Daeng, Rayong
Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2345403
Date Received : May 29, 2023
Date Reported : Jun 12, 2023
Report Number: 2673181-1C6

Page 1 of 1

Sample Description		Air Quality		Location		Parameter		Measurement Date		Measurement by	
Time		May 16, 2023		May 17, 2023		May 18, 2023		May 19, 2023		May 20, 2023	
11:00 AM - 12:00 PM		<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	
01:00 PM - 02:00 PM		<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	
03:00 PM - 04:00 PM		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	
05:00 PM - 06:00 PM		<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	
07:00 PM - 08:00 PM		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	
09:00 PM - 10:00 PM		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	
11:00 PM - 12:00 AM		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	
01:00 AM - 02:00 AM		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	
03:00 AM - 04:00 AM		0.001		<0.001		0.001		<0.001		<0.001	
04:00 AM - 05:00 AM		0.002		<0.001		0.001		<0.001		<0.001	
05:00 AM - 06:00 AM		<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	
07:00 AM - 08:00 AM		<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	
09:00 AM - 10:00 AM		<0.001		0.001		0.001		<0.001		<0.001	
10:00 AM - 11:00 AM		<0.001		0.001		<0.001		<0.001		<0.001	
Average		<0.001		<0.001		0.001		<0.001		<0.001	
1hr - Maximum		0.002		0.001		0.001		0.001		<0.001	
Standard 1hr - Average		0.3		0.3		0.3		0.3		0.3	
Standard 24 hrs - Average		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									

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Analysis / Test Report

Client : Gulf TSC Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasil, Pluak Daeng, Rayong
Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2345403
Date Received : May 29, 2023
Date Reported : Jun 12, 2023
Report Number: 2673182-1C6

Page 1 of 1

Sample Description		Air Quality											
Location	Parameter	๑๙๙											



Analysis / Test Report

Client: Gulf TSC Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasil, Phrak Daeng, Rayong
Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Page 1 of 1

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Analysis / Test Report

Client: Gulf T&E Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluk Daeng, Rayong
Thailand 21140
P/O : GTSA-4210300514
Lot ID: 2345398
Date Received : May 29, 2023
Date Reported : Jun 12, 2023
Report Number: 2673177-1C6

Page 1 of 1

Sample Description		Air Quality	
Location	Location	1st Division	
Parameter	Parameter	Nitrogen dioxide (ppm)	
Measurement Date	Measurement Date	May 16, 2023 - May 23, 2023	
Measurement by	Measurement by	Jardrawes Sruksa	
		2345398-1	2345398-2
		May 16, 2023	May 17, 2023
11:00 AM - 12:00 PM		<0.001	<0.001
12:00 PM - 01:00 PM		<0.001	<0.001
01:00 PM - 02:00 PM		<0.001	<0.001
02:00 PM - 03:00 PM		<0.001	<0.001
03:00 PM - 04:00 PM		<0.001	<0.001
04:00 PM - 05:00 PM		<0.001	<0.001
05:00 PM - 06:00 PM		<0.001	<0.001
06:00 PM - 07:00 PM		<0.001	<0.001
07:00 PM - 08:00 PM		<0.001	<0.001
08:00 PM - 09:00 PM		<0.001	<0.001
09:00 PM - 10:00 PM		<0.001	<0.001
10:00 PM - 11:00 PM		<0.001	<0.001
11:00 PM - 12:00 AM		<0.001	<0.001
12:00 AM - 01:00 AM		<0.001	<0.001
01:00 AM - 02:00 AM		<0.001	<0.001
02:00 AM - 03:00 AM		<0.001	<0.001
03:00 AM - 04:00 AM		<0.001	<0.001
04:00 AM - 05:00 AM		<0.001	<0.001
05:00 AM - 06:00 AM		<0.001	<0.001
06:00 AM - 07:00 AM		<0.001	<0.001
07:00 AM - 08:00 AM		<0.001	<0.001
08:00 AM - 09:00 AM		<0.001	<0.001
09:00 AM - 10:00 AM		<0.001	<0.001
10:00 AM - 11:00 AM		<0.001	<0.001
Average		<0.001	<0.001
1hr - Maximum		<0.001	<0.001
Standard 1hr - Average		0.170	0.170
Standard		: Notification of the National Environment Board No. 33, 2009 (B.E. 2552). Reference Method : US EPA Method Part 50 App. F (Chromoluminescence)	

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Analysis / Test Report

Client : Gulf TSK Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasil, Pluak Daeng, Rayong
Thailand 21140
P/O : GTS4-4210500514
Lot ID: 2345398
Date Received : May 29, 2023
Date Reported : Jun 12, 2023
Report Number: 2673179-1C6

Page 1 of 1

Sample Description		Air Quality	
Location	Parameter	Nitrogen dioxide (ppm)	
Measurement Date	Measurement by	Jardrawee Sirakula	
Time		2345398-8	2345398-9
		May 16, 2023	May 17, 2023
10:00 AM - 11:00 AM		0.001	0.001
11:00 AM - 12:00 PM		0.002	0.001
12:00 PM - 01:00 PM		0.002	<0.001
01:00 PM - 02:00 PM		0.007	0.003
02:00 PM - 03:00 PM		0.016	0.006
03:00 PM - 04:00 PM		0.021	0.015
04:00 PM - 05:00 PM		0.012	0.012
05:00 PM - 06:00 PM		0.014	0.007
06:00 PM - 07:00 PM		0.003	0.004
07:00 PM - 08:00 PM		0.003	0.003
08:00 PM - 09:00 PM		0.003	0.003
09:00 PM - 10:00 PM		0.003	0.001
10:00 PM - 11:00 PM		0.004	0.002
11:00 PM - 12:00 AM		0.005	0.004
12:00 AM - 01:00 AM		0.005	0.006
01:00 AM - 02:00 AM		0.012	0.012
02:00 AM - 03:00 AM		0.017	0.006
03:00 AM - 04:00 AM		0.009	0.004
04:00 AM - 05:00 AM		0.005	0.001
05:00 AM - 06:00 AM		0.004	0.001
06:00 AM - 07:00 AM		0.002	0.002
07:00 AM - 08:00 AM		<0.001	0.002
08:00 AM - 09:00 AM		0.001	<0.001
09:00 AM - 10:00 AM		0.001	<0.001
Average		0.006	0.004
1hr - Maximum		0.021	0.015
Standard 1hr - Average		0.170	0.170
Standard		: Notification of the National Environmental Board No. 33, 2009 (B.E. 2552).	
Reference Method		: US EPA Method Part 50 App. F (Chemiluminescence)	

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Analysis / Test Report

Client : Gulf TSC Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pliak Daeng, Rayong

Thailand 21140

P/O : GT54-4210500514

Project Name : Monitoring EIA

Project Location : GT54

Lot ID: 2345398

Date Received : May 29, 2023

Date Reported : Jun 12, 2023

Report Number: 2673180-1C6

Page 1 of 1

Sample Description Location	Air Quality ไนโตรเจนไดออกไซด์ (ppm) Nitrogen dioxide (ppm)	May 16, 2023 - May 23, 2023									
		May 16, 2023	May 17, 2023	May 18, 2023	May 19, 2023	May 20, 2023	May 21, 2023	May 22, 2023	May 23, 2023	May 24, 2023	May 25, 2023
Measurement Date	Measurement by	Jaradawee Sruksa									
Time		2345398-15	2345398-16	2345398-17	2345398-18	2345398-19	2345398-20	2345398-21			
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	0.003	<0.001	<0.001	<0.001	<0.001	<0.001			
05:00 PM - 06:00 PM		0.002	0.004	0.001	0.001	0.001	<0.001	0.001			
06:00 PM - 07:00 PM		0.002	0.002	0.001	0.001	0.001	0.001	0.001			
07:00 PM - 08:00 PM		0.003	0.002	0.002	0.002	0.001	0.001	0.001			
08:00 PM - 09:00 PM		0.002	0.002	0.002	0.002	0.001	0.001	0.001			
09:00 PM - 10:00 PM		0.005	0.003	0.002	0.002	0.002	0.002	0.002			
10:00 PM - 11:00 PM		0.004	0.004	0.003	0.005	0.002	0.001	0.002			
11:00 PM - 12:00 AM		0.005	0.008	0.003	0.004	0.002	0.001	0.003			
01:00 AM - 02:00 AM		0.004	0.006	0.002	0.004	0.002	0.001	0.002			
02:00 AM - 03:00 AM		0.004	0.005	0.001	0.004	0.002	0.002	0.002			
03:00 AM - 04:00 AM		0.004	0.005	0.001	0.006	0.005	0.002	0.002			
04:00 AM - 05:00 AM		0.009	0.008	0.001	0.007	0.005	0.004	0.004			
05:00 AM - 06:00 AM		0.010	0.018	0.001	0.013	0.005	0.009	0.004			
06:00 AM - 07:00 AM		0.010	0.004	0.001	0.006	0.002	0.002	0.002			
07:00 AM - 08:00 AM		0.003	0.002	<0.001	0.001	0.001	0.002	0.002			
08:00 AM - 09:00 AM		0.002	0.001	<0.001	<0.001	0.001	0.002	0.001			
09:00 AM - 10:00 AM		0.003	0.001	<0.001	0.001	0.001	0.001	0.002			
10:00 AM - 11:00 AM		0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.003			
11:00 AM - 12:00 PM		<0.001	<0.001	<0.001	<0.001	0.008	<0.001	0.002			
Average		0.003	0.004	0.001	0.003	0.002	0.002	0.002			
1hr - Maximum		0.010	0.018	0.003	0.013	0.008	0.009	0.004			
Standard 1hr - Average		0.170	0.170	0.170	0.170	0.170	0.170	0.170			
Standard											
Reference Method		: Notification of the National Environment Board No. 33, 2009 (B.E. 2552).									
		US EPA Method Part 50 App. F (Chemiluminescence)									

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Saranya Chalemitthamrong

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Life Sciences

www.alsglobal.com

13430-617 EMAIL



Analysis / Test Report

Client : Gulf TSC Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pliak Daeng, Rayong

Thailand 21140

P/O : GT54-4210500514

Project Name : Monitoring EIA

Project Location : GT54

Lot ID: 2345398

Date Received : May 29, 2023

Date Reported : Jun 12, 2023

Report Number: 2630845-1C6

Page 1 of 1

Sample Description Location	Air Quality ไนโตรเจนไดออกไซด์ (ppm) Nitrogen dioxide (ppm)	May 16, 2023 - May 23, 2023									
		May 16, 2023	May 17, 2023	May 18, 2023	May 19, 2023	May 20, 2023	May 21, 2023	May 22, 2023	May 23, 2023	May 24, 2023	May 25, 2023
Measurement Date	Measurement by	Jaradawee Sruksa									
Time		2345398-22	2345398-23	2345398-24	2345398-25	2345398-26	2345398-27	2345398-28			
09:00 AM - 10:00 AM		<0.001	0.014	0.001	0.003	0.002	0.002	0.003			
10:00 AM - 11:00 AM		0.001	0.002	<0.001	0.005	0.001	0.002	0.002			
11:00 AM - 12:00 PM		0.001	0.002	<0.001	0.001	0.002	0.002	0.002			
12:00 PM - 01:00 PM		0.002	0.002	0.001	0.003	0.002	0.001	0.003			
01:00 PM - 02:00 PM		0.002	0.001	0.001	0.003	0.001	0.001	0.003			
02:00 PM - 03:00 PM		0.002	0.001	0.002	0.003	0.001	0.001	0.002			
03:00 PM - 04:00 PM		0.002	0.001	0.001	0.016	0.001	0.001	0.002			
04:00 PM - 05:00 PM		0.002	0.001	0.001	0.002	0.001	0.002	0.002			
05:00 PM - 06:00 PM		0.002	0.002	0.002	0.001	0.002	0.001	0.001			
06:00 PM - 07:00 PM		0.002	0.001	<0.001	<0.001	<0.001	<0.001	0.002			
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	0.004	<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	0.003	<0.001	<0.001	<0.001	<0.001	<0.001			
04:00 AM - 05:00 AM		0.001	0.005	<0.001	<0.001	<0.001	<0.001	<0.001			
05:00 AM - 06:00 AM		0.002	0.005	0.002	<0.001	<0.001	<0.001	<0.001			
06:00 AM - 07:00 AM		0.005	0.002	0.001	<0.001	<0.001	<0.001	<0.001			
07:00 AM - 08:00 AM		0.020	0.001	0.001	<0.001	0.003	<0.001	0.002			
08:00 AM - 09:00 AM		0.006	<0.001	0.003	<0.001	0.002	<0.001	0.001			
Average		0.003	0.002	0.002	0.014	0.003	0.002	0.001			
1hr - Maximum		0.020	0.014	0.003	0.016	0.003	0.002	0.001			
Standard 1hr - Average		0.170	0.170	0.170	0.170	0.170	0.170	0.170			
Standard											
Reference Method		: Notification of the National Environment Board No. 33, 2009 (B.E. 2552).									
		US EPA Method Part 50 App. F (Chemiluminescence)									

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Savanya C.

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Life Sciences

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13430-617 EMAIL



Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasit, Pluak Daeng,
Rayong Thailand 21140

Lot ID : 2345407
Date Received : May 29, 2023
Date Reported : Jun 07, 2023
Report Number : 2630852-1 C6

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Sample Number : 2345407-1 to 7
Parameter : Wind Speed / Wind Direction
Location : ตำบลมหาสารคาม
Sampling Date : May 16 - May 23, 2023
Sampling by : Jaradawe Sruksa

Time	May 16 - May 17, 2023		May 17 - May 18, 2023		May 18 - May 19, 2023		May 19 - May 20, 2023		May 20 - May 21, 2023		May 21 - May 22, 2023		May 22 - May 23, 2023									
	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	1.4	168.0	SSE	2.7	161.0	SSE	3.7	17.0	NNE	1.7	3.0	N	2.0	230.0	SW	0.3	211.0	SSW	2.5	217.0	SW	
12:00 PM - 01:00 PM	1.5	230.0	SW	1.8	210.0	SSW	4.8	108.0	ESE	2.1	67.0	ENE	1.5	124.0	SE	0.9	266.0	W	1.5	196.0	SSW	
01:00 PM - 02:00 PM	2.0	281.0	W	2.8	200.0	SSW	2.1	187.0	S	2.1	116.0	ESE	1.9	161.0	SSE	0.7	187.0	S	0.7	208.0	SSW	
02:00 PM - 03:00 PM	0.9	207.0	SSW	3.3	233.0	SW	2.2	198.0	SSW	2.4	215.0	SW	1.8	180.0	S	3.7	252.0	WSW	0.2	-	-	
03:00 PM - 04:00 PM	0.2	-	-	-	0.8	235.0	SW	2.5	278.0	W	0.8	167.0	SSE	0.9	203.0	SSW	1.1	189.0	S	0.3	206.0	SSW
04:00 PM - 05:00 PM	0.3	296.0	WNW	0.7	141.0	SE	0.6	299.0	WNW	0.8	147.0	SSE	0.7	189.0	S	2.5	241.0	WSW	0.5	237.0	WSW	
05:00 PM - 06:00 PM	1.3	299.0	WNW	0.3	193.0	SSW	0.0	-	-	0.0	-	-	0.0	-	-	2.0	211.0	SSW	0.8	226.0	SW	
06:00 PM - 07:00 PM	0.3	114.0	ESE	1.6	173.0	S	0.5	104.0	ESE	2.1	62.0	ENE	0.9	87.0	E	1.2	218.0	SW	0.8	210.0	SSW	
07:00 PM - 08:00 PM	0.0	-	-	1.2	32.0	NNE	0.0	-	-	0.9	136.0	SE	0.8	330.0	NNW	1.0	225.0	SW	0.2	-	-	
08:00 PM - 09:00 PM	0.0	-	-	0.3	88.0	E	0.1	-	-	0.5	84.0	E	0.0	-	-	0.6	225.0	SW	0.2	-	-	
09:00 PM - 10:00 PM	0.2	-	-	0.0	-	-	0.1	-	-	0.2	-	-	0.3	180.0	S	0.6	201.0	SSW	0.0	-	-	
10:00 PM - 11:00 PM	0.2	-	-	0.2	-	-	0.2	-	-	0.0	-	-	0.3	37.0	NE	0.0	-	-	0.1	-	-	
11:00 PM - 12:00 AM	0.3	213.0	SSW	0.3	80.0	E	0.3	85.0	E	0.5	110.0	ESE	1.0	81.0	E	0.3	214.0	SW	0.1	-	-	
12:00 AM - 01:00 AM	0.3	132.0	SE	0.3	109.0	ESE	0.3	122.0	ESE	0.3	127.0	SE	0.2	-	-	0.0	-	-	0.3	206.0	SSW	
01:00 AM - 02:00 AM	0.5	107.0	ESE	0.2	-	-	0.2	-	-	0.3	84.0	E	0.2	-	-	0.0	-	-	0.3	173.0	S	
02:00 AM - 03:00 AM	0.2	-	-	0.1	-	-	0.0	-	-	0.3	82.0	E	0.3	85.0	E	0.5	177.0	S	0.3	156.0	SSE	
03:00 AM - 04:00 AM	0.1	-	-	0.1	-	-	0.8	166.0	SSE	0.5	63.0	ENE	0.1	-	-	0.3	168.0	SSE	0.5	152.0	SSE	
04:00 AM - 05:00 AM	0.1	-	-	0.3	68.0	ENE	1.6	278.0	W	0.2	-	-	0.2	-	-	0.3	110.0	ESE	1.2	186.0	S	
05:00 AM - 06:00 AM	0.0	-	-	0.0	-	-	1.7	280.0	W	0.0	-	-	0.3	80.0	E	0.4	81.0	E	1.6	137.0	SE	
06:00 AM - 07:00 AM	0.0	-	-	2.0	64.0	ENE	0.9	36.0	NE	1.1	71.0	ENE	1.3	71.0	ENE	0.2	-	-	1.0	81.0	E	
07:00 AM - 08:00 AM	0.7	102.0	ESE	1.5	85.0	E	3.1	45.0	NE	2.2	68.0	ENE	1.0	102.0	ESE	0.2	-	-	0.3	127.0	SE	
08:00 AM - 09:00 AM	0.3	127.0	SE	2.6	97.0	E	2.0	29.0	NNE	3.1	106.0	ESE	0.8	91.0	E	0.7	122.0	ESE	0.5	186.0	S	
09:00 AM - 10:00 AM	0.5	217.0	SW	4.0	68.0	ENE	3.4	20.0	NNE	5.3	102.0	ESE	0.6	132.0	SE	1.7	153.0	SSE	0.2	-	-	
10:00 AM - 11:00 AM	1.7	219.0	SW	3.5	84.0	E	2.7	350.0	N	2.0	188.0	S	1.5	228.0	SW	2.3	95.0	E	0.2	-	-	

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Sarayuth Jitranont
Assistant General Manager

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Sarayuth Jitranont
Assistant General Manager



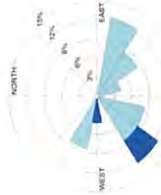
Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasit, Pluak Daeng,
Rayong Thailand 21140

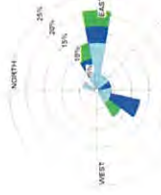
Lot ID : 2345407
Date Received : May 29, 2023
Date Reported : Jun 07, 2023
Report Number : 2630852-1 C6

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

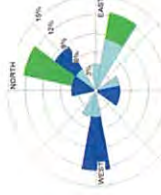
Wind Rose



Date : May 16-17, 2023



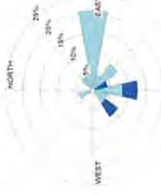
Date : May 17-18, 2023



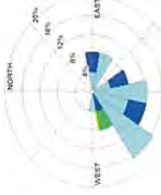
Date : May 18-19, 2023



Date : May 19-20, 2023



Date : May 20-21, 2023



Date : May 21-22, 2023

WS(m/s)	%
> 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	4.76
1.7-3.3	17.86
0.3-1.7	49.40
Calm	27.98



Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tassit, Pluak Daeng,
Rayong Thailand 21140

Lot ID : 2345407
Date Received : May 29, 2023
Date Reported : Jun 07, 2023
Report Number : 2630852-1 C6

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Sample Number : 2345407-8 to 14
Parameter : Wind Speed / Wind Direction
Location : โรงงานอุตสาหกรรมผลิตพลาสติกชีวภาพ
Sampling Date : May 16 - May 23, 2023
Sampling by : Jaradrawee Sirulaka

Time		May 16 - May 17, 2023		May 17 - May 18, 2023		May 18 - May 19, 2023		May 19 - May 20, 2023		May 20 - May 21, 2023		May 21 - May 22, 2023		May 22 - May 23, 2023								
		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	0.5	26.0	NNE	1.1	276.0	W	0.0	-	0.3	348.0	NNW	3.3	236.0	SW	0.0	-	0.0	-			
	11:00 AM - 12:00 PM	0.6	63.0	ENE	0.7	12.0	NNE	0.6	303.0	WNW	0.4	277.0	W	0.2	-	-	-	0.2	-			
	12:00 PM - 01:00 PM	0.5	52.0	NE	1.8	275.0	W	0.9	265.0	W	2.2	254.0	WSW	0.0	-	0.0	-	0.0	-			
	01:00 PM - 02:00 PM	0.0	-	-	0.9	270.0	W	0.8	318.0	NW	0.4	315.0	NW	0.3	346.0	NNW	0.0	-	0.0	-		
	02:00 PM - 03:00 PM	0.2	-	-	0.6	286.0	WNW	0.6	293.0	WNW	0.1	-	-	0.2	-	0.5	49.0	NE	0.5	44.0	NE	
	03:00 PM - 04:00 PM	0.3	320.0	NW	1.5	257.0	WSW	0.2	-	-	0.0	-	0.6	285.0	WNW	0.9	64.0	ENE	0.7	66.0	ENE	
	04:00 PM - 05:00 PM	0.2	-	-	0.0	-	-	0.4	291.0	WNW	0.0	-	-	0.5	340.0	NNW	0.7	80.0	E	0.4	59.0	ENE
	05:00 PM - 06:00 PM	0.3	37.0	NE	1.0	59.0	ENE	0.0	-	-	0.1	-	0.0	-	0.4	60.0	ENE	0.8	65.0	ENE	-	-
	06:00 PM - 07:00 PM	0.4	37.0	NE	0.4	62.0	ENE	0.0	-	-	0.6	69.0	ENE	0.6	62.0	ENE	0.5	67.0	ENE	0.6	18.0	NNE
	07:00 PM - 08:00 PM	0.5	47.0	NE	0.3	56.0	NE	0.6	62.0	ENE	0.3	66.0	ENE	0.6	47.0	NE	0.2	-	0.0	-	-	-
	08:00 PM - 09:00 PM	0.0	-	-	0.1	-	0.0	-	0.0	-	0.0	-	0.2	-	0.0	-	0.1	-	0.2	-	-	-
	09:00 PM - 10:00 PM	0.2	-	-	0.1	-	0.2	-	0.2	-	0.2	-	0.0	-	0.0	-	0.0	-	0.0	-	-	-
	10:00 PM - 11:00 PM	0.1	-	-	0.1	-	0.3	62.0	ENE	0.0	-	0.1	-	0.1	-	0.0	-	0.0	-	0.0	-	-
	11:00 PM - 12:00 AM	0.3	46.0	NE	0.2	-	-	0.3	61.0	ENE	0.4	53.0	NE	0.2	-	0.3	60.0	ENE	0.2	-	-	-
	12:00 AM - 01:00 AM	0.3	47.0	NE	0.2	-	-	0.5	41.0	NE	0.0	-	0.2	-	0.2	-	0.3	60.0	ENE	0.3	57.0	ENE
	01:00 AM - 02:00 AM	0.2	-	-	0.3	57.0	ENE	0.0	-	-	0.0	-	0.2	-	0.2	-	0.3	60.0	ENE	0.3	56.0	NE
	02:00 AM - 03:00 AM	0.2	-	-	0.3	56.0	NE	0.0	-	-	0.0	-	0.3	47.0	NE	0.5	59.0	ENE	0.5	56.0	NE	-
	03:00 AM - 04:00 AM	0.1	-	-	0.2	-	0.0	-	0.0	-	0.3	27.0	NNE	0.3	47.0	NE	0.1	-	0.1	-	-	-
	04:00 AM - 05:00 AM	0.1	-	-	0.0	-	-	0.3	339.0	NNW	0.5	27.0	NNE	0.5	47.0	NE	0.1	-	0.2	-	-	-
	05:00 AM - 06:00 AM	0.5	47.0	NE	0.0	-	-	0.6	284.0	WNW	0.6	354.0	N	0.1	-	0.6	38.0	NE	0.1	-	-	-
	06:00 AM - 07:00 AM	0.3	30.0	NNE	0.6	202.0	SSW	0.6	305.0	NW	0.0	-	0.2	-	0.0	-	0.0	-	0.0	-	-	-
	07:00 AM - 08:00 AM	0.5	31.0	NNE	0.6	16.0	NNE	0.8	223.0	SW	1.2	311.0	NW	0.0	-	0.3	55.0	NE	0.5	31.0	NNE	-
	08:00 AM - 09:00 AM	0.7	47.0	NE	2.6	156.0	SSE	0.6	323.0	NNE	0.2	-	0.6	354.0	N	1.4	267.0	W	1.7	210.0	SSW	-
	09:00 AM - 10:00 AM	0.0	-	-	0.7	311.0	NW	1.0	14.0	NNE	1.0	257.0	WSW	0.0	-	0.0	-	0.0	-	0.0	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Saranyuth Ultratont
Assistant General Manager

Analysis / Test Report

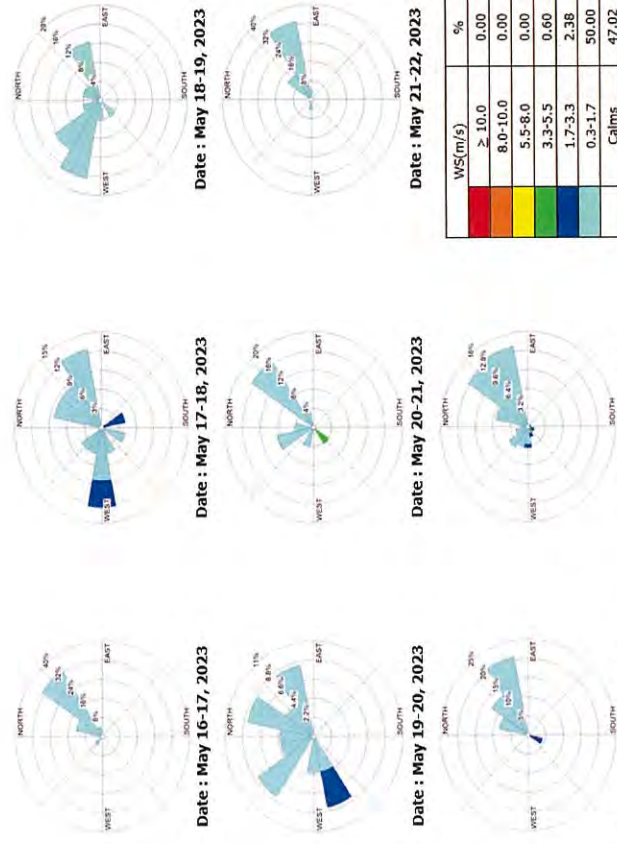
Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tassit, Pluak Daeng,
Rayong Thailand 21140

Lot ID : 2345407
Date Received : May 29, 2023
Date Reported : Jun 07, 2023
Report Number : 2630852-1 C6

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Page 2 of 2

Wind Rose



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Approved by

Saranyuth Ultratont
Assistant General Manager



Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng,
Rayong Thailand 21140

Lot ID : 2345407
Date Received : May 29, 2023
Date Reported : Jun 07, 2023
Report Number : 2630852-1 C6

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Sample Number
2345407-15 to 21

Parameter
Wind Speed / Wind Direction

Location
โรงงานอุตสาหกรรม(ท่าเรืออุตสาหกรรม)

Sampling Date
May 16 - May 23, 2023

Sampling by
Jaradrawee Srinuksa

Time	May 16 - May 17, 2023		May 17 - May 18, 2023		May 18 - May 19, 2023		May 19 - May 20, 2023		May 20 - May 21, 2023		May 21 - May 22, 2023		May 22 - May 23, 2023												
	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)											
12:00 PM - 01:00 PM	0.4	225.0	SW	0.0	-	0.2	-	0.0	-	0.6	245.0	WSW	0.1	-	0.3	40.0	NE								
01:00 PM - 02:00 PM	0.3	57.0	ENE	0.0	-	0.0	-	0.3	35.0	NNE	0.7	350.0	N	0.1	-	0.2	-								
02:00 PM - 03:00 PM	0.2	-	-	0.0	-	0.3	290.0	WNW	0.2	-	0.7	326.0	NNW	0.7	12.0	NNE	0.2	-							
03:00 PM - 04:00 PM	0.2	-	-	0.8	10.0	N	0.3	225.0	SW	0.3	333.0	NNW	0.5	346.0	NNW	0.6	224.0	SW	0.6	238.0	WSW				
04:00 PM - 05:00 PM	0.5	213.0	SSW	0.0	-	0.1	-	0.3	329.0	NNW	0.3	83.0	E	0.6	149.0	SSE	0.5	233.0	SW	0.5	233.0	SW			
05:00 PM - 06:00 PM	0.1	-	0.0	0.0	-	0.5	188.0	S	0.0	-	0.0	-	0.6	150.0	SSE	0.3	167.0	SSE	0.3	167.0	SSE				
06:00 PM - 07:00 PM	0.0	-	0.2	-	0.2	-	0.3	140.0	SE	0.1	-	0.4	150.0	SSE	0.7	105.0	ESE	0.3	186.0	S	0.3	186.0	S		
07:00 PM - 08:00 PM	0.0	-	0.3	143.0	SE	0.3	134.0	SE	0.1	-	0.0	-	0.0	-	0.1	-	0.3	179.0	S	0.1	0.3	179.0	S		
08:00 PM - 09:00 PM	0.2	-	0.3	143.0	SE	0.3	229.0	SW	0.0	-	0.5	191.0	S	0.1	-	0.3	179.0	S	0.1	0.3	179.0	S			
09:00 PM - 10:00 PM	0.3	179.0	S	0.1	-	0.1	-	0.1	-	0.5	164.0	SSE	0.7	191.0	S	0.3	190.0	S	0.1	0.3	190.0	S			
10:00 PM - 11:00 PM	0.5	179.0	S	0.3	143.0	SE	0.0	-	0.4	164.0	SSE	0.5	191.0	S	0.3	198.0	SSW	0.0	-	0.3	198.0	SSW			
11:00 PM - 12:00 AM	0.3	179.0	S	0.2	-	0.0	-	0.0	-	0.3	208.0	SSW	0.5	191.0	S	0.4	153.0	SSE	0.2	-	0.4	153.0	SSE		
12:00 AM - 01:00 AM	0.3	179.0	S	0.2	-	0.5	45.0	NE	0.3	325.0	NW	0.2	-	0.3	214.0	SW	0.5	179.0	S	0.5	179.0	S			
01:00 AM - 02:00 AM	0.1	-	0.0	-	0.0	-	0.8	5.0	N	0.0	-	0.2	-	0.3	265.0	W	0.0	-	-	0.3	265.0	W			
02:00 AM - 03:00 AM	0.2	-	0.2	-	0.2	-	0.0	-	0.0	-	0.0	-	0.3	265.0	W	0.3	179.0	S	0.3	179.0	S				
03:00 AM - 04:00 AM	0.2	-	0.3	143.0	SE	0.2	-	0.2	-	0.2	-	0.3	191.0	S	0.5	265.0	W	0.2	-	0.2	0.5	265.0	W		
04:00 AM - 05:00 AM	0.3	179.0	S	0.3	143.0	SE	0.0	-	0.3	324.0	NW	0.3	191.0	S	0.2	-	0.2	-	0.2	-	0.2	-	0.2	-	
05:00 AM - 06:00 AM	0.5	87.0	E	0.0	-	0.0	-	0.0	-	0.4	325.0	NW	1.0	330.0	NNW	0.0	-	0.2	-	0.2	-	0.2	-		
06:00 AM - 07:00 AM	0.5	69.0	ENE	1.1	359.0	N	0.7	317.0	NW	0.5	325.0	NW	0.6	107.0	ESE	0.1	-	0.3	79.0	E	0.3	79.0	E		
07:00 AM - 08:00 AM	0.3	69.0	ENE	0.3	268.0	W	1.1	192.0	SSW	0.5	353.0	N	0.5	87.0	E	0.2	-	1.5	346.0	N	1.5	346.0	N		
08:00 AM - 09:00 AM	0.0	-	-	0.0	-	1.6	325.0	NW	0.5	200.0	SSW	0.5	115.0	ESE	0.8	203.0	SSW	1.2	303.0	WNW	1.2	303.0	WNW		
09:00 AM - 10:00 AM	2.1	333.0	NNW	1.1	320.0	NW	1.0	277.0	W	0.3	292.0	WNW	0.0	-	1.0	341.0	NNW	1.0	342.0	NNW	1.0	342.0	NNW		
10:00 AM - 11:00 AM	0.0	-	0.5	214.0	SW	1.5	320.0	NW	0.2	-	0.2	-	0.7	331.0	NNW	0.8	200.0	SSW	0.8	200.0	SSW	0.8	200.0	SSW	
11:00 AM - 12:00 PM	0.0	-	1.0	283.0	WNW	0.0	-	0.8	284.0	WNW	0.3	178.0	S	0.7	221.0	SW	0.8	143.0	SE	0.7	221.0	SW	0.8	143.0	SE

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Approved by

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng,
Rayong Thailand 21140

Lot ID : 2345407
Date Received : May 29, 2023
Date Reported : Jun 07, 2023
Report Number : 2630852-1 C6

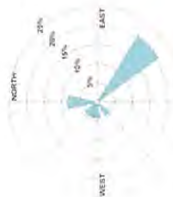
P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Page 1 of 2

Wind Rose



Date : May 16-17, 2023



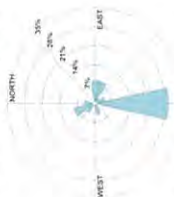
Date : May 17-18, 2023



Date : May 18-19, 2023



Date : May 19-20, 2023



Date : May 20-21, 2023



Date : May 21-22, 2023

WS(m/s)	%
> 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	0.00
1.7-3.3	0.60
0.3-1.7	57.73
Calms	41.67

Date : May 22-23, 2023

Date : May 22-23, 2023

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Approved by

Sarayuth Jitranont
Assistant General Manager

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Analysis / Test Report

Client : Gulf T&S Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasit, Pluak Daeng,

Rayong Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GTS4

Sample Number 2345407-22 to 28

Parameter Wind Speed / Wind Direction

Location จ.ระยอง

Sampling Date May 16 - May 23, 2023

Sampling by Jaradawee Siruksa

Lot ID : 2345407

Date Received : May 29, 2023

Date Reported : Jun 07, 2023

Report Number : 2630852-1 C6

Page 1 of 2



Analysis / Test Report

Client : Gulf T&S Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasit, Pluak Daeng,

Rayong Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GTS4

Page 2 of 2

Sample Number 2345407-22 to 28

Parameter Wind Speed / Wind Direction

Location จ.ระยอง

Sampling Date May 16 - May 23, 2023

Sampling by Jaradawee Siruksa

Time	May 16 - May 17, 2023	May 17 - May 18, 2023	May 18 - May 19, 2023	May 19 - May 20, 2023	May 20 - May 21, 2023	May 21 - May 22, 2023	May 22 - May 23, 2023
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	0.7 183.0 S	0.0 -	2.8 233.0 SW	0.0 -	1.5 264.0 W	1.1 260.0 W	3.0 184.0 S
10:00 AM - 11:00 AM	0.0 -	0.0 -	1.1 216.0 SW	2.4 39.0 NE	1.1 0.0 N	2.8 182.0 S	3.3 152.0 SSE
11:00 AM - 12:00 PM	1.6 194.0 SSW	0.0 -	0.3 221.0 SW	1.8 32.0 NNE	1.9 38.0 NE	1.2 178.0 S	2.8 177.0 S
12:00 PM - 01:00 PM	1.0 333.0 NNW	3.1 137.0 SE	0.0 -	1.0 183.0 S	0.0 -	2.0 136.0 SE	1.3 175.0 S
01:00 PM - 02:00 PM	1.8 203.0 SSW	2.2 153.0 SSE	0.8 137.0 SE	0.9 126.0 SE	0.0 -	1.8 136.0 SE	1.9 145.0 SE
02:00 PM - 03:00 PM	0.7 124.0 SE	3.5 136.0 SE	0.0 -	0.0 -	0.3 202.0 SSW	0.5 160.0 SSE	2.4 125.0 SE
03:00 PM - 04:00 PM	1.3 84.0 E	0.0 -	1.2 129.0 SE	0.0 -	0.8 223.0 SW	1.3 148.0 SSE	1.2 137.0 SE
04:00 PM - 05:00 PM	1.0 52.0 NE	0.0 -	0.0 -	0.6 193.0 SSW	0.5 138.0 SE	1.0 167.0 SSE	1.0 143.0 SE
05:00 PM - 06:00 PM	3.2 156.0 SSE	0.0 -	0.0 -	0.0 -	0.5 162.0 SSE	1.0 142.0 SE	1.5 138.0 SE
06:00 PM - 07:00 PM	0.0 -	0.0 -	1.5 151.0 SSE	1.0 158.0 SSE	0.0 -	1.2 146.0 SE	2.0 145.0 SE
07:00 PM - 08:00 PM	0.0 -	0.3 140.0 SE	2.5 137.0 SE	0.0 -	0.0 -	0.9 133.0 SE	0.8 131.0 SE
08:00 PM - 09:00 PM	1.6 173.0 S	0.3 124.0 SE	1.1 140.0 SE	0.0 -	0.2 -	1.3 191.0 S	1.1 127.0 SE
09:00 PM - 10:00 PM	0.9 193.0 SSW	0.5 122.0 ESE	1.2 137.0 SE	0.6 194.0 SSW	0.3 139.0 SE	0.0 -	0.7 129.0 SE
10:00 PM - 11:00 PM	0.9 142.0 SE	0.3 139.0 SE	0.9 142.0 SE	0.0 -	0.0 -	0.8 132.0 SE	1.0 152.0 SSE
11:00 PM - 12:00 AM	0.0 -	0.3 172.0 S	0.9 105.0 ESE	0.0 -	0.7 155.0 SSE	0.0 -	0.7 155.0 SSE
12:00 AM - 01:00 AM	0.7 110.0 ESE	0.2 -	1.5 129.0 SE	0.0 -	0.0 -	0.0 -	0.0 -
01:00 AM - 02:00 AM	0.0 -	0.1 -	1.0 155.0 SSE	0.0 -	0.0 -	1.4 87.0 E	0.7 124.0 SE
02:00 AM - 03:00 AM	0.0 -	0.3 100.0 E	1.3 146.0 SE	0.5 30.0 NNE	0.5 140.0 SE	1.4 86.0 E	1.8 133.0 SE
03:00 AM - 04:00 AM	0.0 -	1.7 124.0 SE	0.8 120.0 ESE	1.3 174.0 S	0.3 153.0 SSE	1.0 136.0 SE	1.4 150.0 SSE
04:00 AM - 05:00 AM	2.6 181.0 S	0.0 -	1.5 94.0 E	3.0 128.0 SE	1.4 239.0 WSW	1.5 219.0 SW	2.0 149.0 SSE
05:00 AM - 06:00 AM	0.4 119.0 ESE	0.7 262.0 W	1.3 232.0 SW	1.6 244.0 WSW	1.7 201.0 SSW	0.7 256.0 WSW	2.8 110.0 ESE
06:00 AM - 07:00 AM	1.4 283.0 WNW	1.1 202.0 SSW	0.0 -	0.5 230.0 SW	0.7 242.0 WSW	3.0 150.0 SSE	1.2 184.0 S
07:00 AM - 08:00 AM	0.0 -	2.5 233.0 SW	0.8 97.0 E	1.2 226.0 SW	1.3 231.0 SW	2.2 218.0 SW	1.3 193.0 SSW
08:00 AM - 09:00 AM	0.4 210.0 SSW	0.0 -	1.3 112.0 ESE	1.4 343.0 NNW	1.2 84.0 E	0.0 -	1.5 108.0 ESE

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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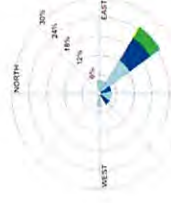
Saranyuth Jitranont

Assistant General Manager

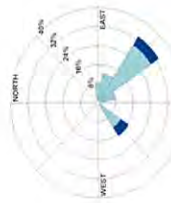
Wind Rose



Date : May 16-17, 2023



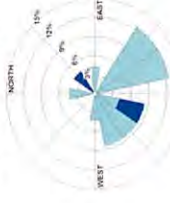
Date : May 17-18, 2023



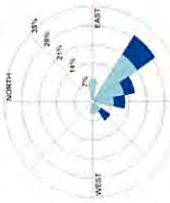
Date : May 18-19, 2023



Date : May 20-21, 2023



Date : May 20-21, 2023



Date : May 21-22, 2023

WS(m/s)	%
≥ 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	1.19
1.7-3.3	16.07
0.3-1.7	54.76
Calm	27.98

Date : May 16-23, 2023

Date : May 22-23, 2023

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Saranyuth Jitranont

Assistant General Manager

ภาคผนวก ค-2

คุณภาพอากาศจากปล่องระบายอากาศ



Analysis / Test Report

Client : Gulf T&S Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GTS4

Lot ID: 2345645

Date Received : May 19, 2023
Date Reported : May 26, 2023
Report Number : 2631242-1

Page 1 of 1

Sample Number 2345645-1

Sample Description Emission from Stationary Source

Location 11000 HRSG 11

Measurement Date May 18, 2023

Stack Description									
Ambient Temperature	37	°C	Diameter	3.00	m	Oxygen	14.11	%	
Ambient Pressure	751	mmHg	Shape	Circle		Carbon dioxide	3.83	%	
Type of Process	Combustion		Stack Temperature	121	°C	Gas Velocity	16.52	m/s	
Type of Fuel	Natural Gas		Moisture	7.23	%	Flow Rate	291282	Nm ³ /hr	
Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm)	Sulfur Dioxide (ppm)				
1	12:05 PM - 12:25 PM	14.11	3.82	15.48	31.66	at Actual O ₂ at 7% O ₂	0.10	0.21	
2	12:26 PM - 12:46 PM	14.11	3.84	15.34	31.42		0.15	0.30	
3	12:47 PM - 01:07 PM	14.12	3.84	15.28	31.35		0.15	0.31	
Average (ppm)		14.11	3.83	15.37	31.48		0.13	0.27	
Guideline ^{1/} (ppm)				60				6	
Guideline ^{2/} (ppm)								20	
Result (mg/Nm ³)				28.91	59.22		0.35	0.72	
Emission Rate at Actual O ₂ (g/s)				2.3395				0.0283	
Guideline ^{1/} (g/s)				7.4				1.0	
Method				US EPA Method 7E				US EPA Method 6C	

Sampled By : Saket Phaisanphieut

Guideline : ^{1/} Environmental Impact Assessment Report of Gulf T&S Co., Ltd.

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

Technical Management

Wichan Chombarat
Manager
วชิรณันท์ 7-204-6-6113

Approved by

Sarayuth Jitranont
Assistant General Manager
วชิรณันท์ 7-204-6-702

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Analysis / Test Report

Client : Gulf T&S Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GTS4

Lot ID: 2345645

Date Received : May 19, 2023
Date Reported : May 26, 2023
Report Number : 2631242-1

Page 1 of 1

Sample Number 2345645-1

Sample Description Emission from Stationary Source

Location 11000 HRSG 11

Measurement Date May 18, 2023

Stack Description									
Ambient Temperature	37	°C	Diameter	3.00	m	Oxygen	14.11	%	
Ambient Pressure	751	mmHg	Shape	Circle		Carbon dioxide	3.83	%	
Type of Process	Combustion		Stack Temperature	121	°C	Gas Velocity	16.52	m/s	
Type of Fuel	Natural Gas		Moisture	7.23	%	Flow Rate	291282	Nm3/hr	
	Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Carbon Monoxide (ppm)				
	1	12:05 PM - 12:25 PM	14.11	3.82	at Actual O ₂ at 7% O ₂				
	2	12:26 PM - 12:46 PM	14.11	3.84	1.49 3.05				
	3	12:47 PM - 01:07 PM	14.12	3.84	1.29 2.65				
	Average (ppm)		14.11	3.83	1.16 2.37				
	Guideline (ppm)				1.31 2.69				
	Result (mg/Nm³)				- 690				
Emission Rate at Actual O ₂ (g/s)					1.50 3.08				
Method					0.1217				
					US EPA Method 10				

Sampled By : Saket Phaisanphieut

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 Chombarat
Manager
วชิรณันท์ 7-204-6-6113

Approved by

Sarayuth Jitranont
Assistant General Manager
วชิรณันท์ 7-204-6-702

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Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phrak Dueng, Rayong Thailand
21140

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Sample Number : 2345654-1
Sampled Date : May 18, 2023
Sample Description : Emission from Stationary Source
Location : Udaa HRSG 11
Date Analysis Commenced : May 25, 2023
Condition of Sample : Extracted into one filter paper placed in plastic petri dish

Stack Description									
Ambient Pressure	751	mmHg	Diameter	3.00	m	Oxygen	14.1	%	
Ambient Temperature	37.0	°C	Shape	Circle		Carbon Dioxide	3.8	%	
Type of Process	Combustion		Stack Temperature	121	°C	Gas Velocity	16.5	m/s	
Type of Fuel	Natural Gas		Moisture	7.18	%	Flow Rate (Actual O2)	291057	Nm3/hr	
Analyte	Sampled Time	Unit	LOQ (LOR)	Result	Guideline	Guideline	Method	Testing Location	
(1) (2)									
Air Testing	12:05 PM - 12:53 PM	mg/m3	0.5	<0.5	<0.5	28	60	United States Environmental Protection Agency, EPA Method 5	Bangkok

Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf TSA Co., Ltd.
Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

Technical Management : **Savanya C.** Approved by : **Kanokorn Anek**
Savanya Chaitamthong Kanokorn Anek
Scientist (4) Senior Manager
หน้างาน 7-204-9-6111

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13431-61/EMAIL

S:\Reports\Air Stack_O2_261.pr (2:22PM)



Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phrak Dueng, Rayong Thailand
21140

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Sample Number : 2345654-1
Sampled Date : May 18, 2023
Sample Description : Emission from Stationary Source
Location : Udaa HRSG 11
Date Analysis Commenced : May 25, 2023
Condition of Sample : Extracted into one filter paper placed in plastic petri dish

Stack Description									
Ambient Pressure	751	mmHg	Diameter	3.00	m	Oxygen	14.1	%	
Ambient Temperature	37.0	°C	Shape	Circle		Carbon Dioxide	3.8	%	
Type of Process	Combustion		Stack Temperature	121	°C	Gas Velocity	16.5	m/s	
Type of Fuel	Natural Gas		Moisture	7.18	%	Flow Rate (Actual O2)	291057	Nm3/hr	
Analyte	Sampled Time	Unit	LOQ (LOR)	Result	Guideline	Guideline	Method	Testing Location	
(1) (2)									
Air Testing	12:05 PM - 12:53 PM	g/s	-	<0.04	1.8	-	Calculated		Bangkok

Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf TSA Co., Ltd.
Guideline (2) Notification of the Ministry of Natural Resources and Environment, 2010 (B.E. 2553) on Emission Standard from New Power Plants.

Sampled By : Saket Phaisanphisut

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

Technical Management : **Savanya C.** Approved by : **Kanokorn Anek**
Savanya Chaitamthong Kanokorn Anek
Scientist (4) Senior Manager
หน้างาน 7-204-9-6111

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



13431-61/EMAIL

S:\Reports\Air Stack_O2_261.pr (2:22PM)



Analysis / Test Report

Client : Gulf T54 Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong

Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GTS4

Lot ID: 2345651

Date Received : May 18, 2023

Date Reported : May 26, 2023

Report Number : 2631244-1

Page 1 of 1

Sample Number 2345651-1
Sample Description Emission from Stationary Source
Location Uthai HRSG 12
Measurement Date May 18, 2023

Stack Description									
Ambient Temperature	37	°C	Diameter	3.00	m	Oxygen	14.19	%	
Ambient Pressure	751	mmHg	Shape	Circle		Carbon dioxide	3.93	%	
Type of Process	Combustion		Stack Temperature	117	°C	Gas Velocity	16.39	m/s	
Type of Fuel	Natural Gas		Moisture	8.98	%	Flow Rate	286424	Nm ³ /hr	
Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Oxides of Nitrogen (ppm) at Actual O ₂	Sulfur Dioxide (ppm) at Actual O ₂	Sulfur Dioxide (ppm) at 7% O ₂			
1	10:40 AM - 11:00 AM	14.19	3.93	11.02	22.82	0.82	1.69		
2	11:01 AM - 11:21 AM	14.19	3.92	11.01	22.79	0.82	1.70		
3	11:22 AM - 11:42 AM	14.20	3.93	11.24	23.32	0.82	1.70		
Average (ppm)		14.19	3.93	11.09	22.98	0.82	1.70		
Guideline ^{1/} (ppm)					60		6		
Guideline ^{2/} (ppm)					120		20		
Result (mg/Nm ³)				20.86	43.23	2.15	4.45		
Emission Rate at Actual O ₂ (g/s)				1.6599			0.1707		
Guideline ^{1/} (g/s)				7.4			1.0		
Method				US EPA Method 7E			US EPA Method 6C		

Sampled By : Anuvat Mounpal

Guideline : ^{1/} Environmental Impact Assessment Report of Gulf T54 Co., Ltd.

^{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
Manager
โทรศัพท์ 7-204-6-6113

Approved by

Sarayu Jitranont
Assistant General Manager
โทรศัพท์ 7-204-6-4702

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



Analysis / Test Report

Client : Gulf T54 Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong

Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GTS4

Lot ID: 2345651

Date Received : May 18, 2023

Date Reported : May 26, 2023

Report Number : 2631244-1

Page 1 of 1

Sample Number 2345651-1
Sample Description Emission from Stationary Source
Location Uthai HRSG 12
Measurement Date May 18, 2023

Stack Description									
Ambient Temperature	37	°C	Diameter	3.00	m	Oxygen	14.19	%	
Ambient Pressure	751	mmHg	Shape	Circle		Carbon dioxide	3.93	%	
Type of Process	Combustion		Stack Temperature	117	°C	Gas Velocity	16.39	m/s	
Type of Fuel	Natural Gas		Moisture	8.98	%	Flow Rate	286424	Nm ³ /hr	
Run No.	Sampling Time	Oxygen (%)	Carbon Dioxide (%)	Carbon Monoxide (ppm) at Actual O ₂	At 7% O ₂				
1	10:40 AM - 11:00 AM	14.19	3.93	1.49	3.08				
2	11:01 AM - 11:21 AM	14.19	3.92	1.50	3.10				
3	11:22 AM - 11:42 AM	14.20	3.93	1.48	3.07				
Average (ppm)		14.19	3.93	1.49	3.08				
Guideline (ppm)					690				
Result (mg/Nm ³)				1.70	3.53				
Emission Rate at Actual O ₂ (g/s)				0.1356					
Method				US EPA Method 10					

Sampled By : Anuvat Mounpal

Guideline :

Notification of the Ministry of Industry 2006 (B.E. 2549) Published in the Royal Government Gazette, Vol.123 Special Part 125 O,

dated December 4, 2006 (B.E. 2549)

Technical Management

Wichan Choonharat
Manager
โทรศัพท์ 7-204-6-6113

Approved by

Sarayu Jitranont
Assistant General Manager
โทรศัพท์ 7-204-6-4702

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Analysis / Test Report

Client: Gulf TS4 Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GTS4

Lot ID: 2345660

Date Received : May 18, 2023

Date Reported : May 26, 2023

Report Number: 2631256-1

Page 1 of 2

Sample Number 2345660-1

Sample Date May 18, 2023

Sample Description Emission from Stationary Source

Location 11aa HIRSG 12

Date Analysis Commenced May 19, 2023

Condition of Sample Extracted into one filter paper placed in plastic petri dish

Stack Description									
Ambient Pressure	751	mmHg	3.00	m	Oxygen	14.0	%		
Ambient Temperature	37.0	°C		Circle	Carbon Dioxide	3.8	%		
Type of Process	Combustion	Stack Temperature	117	°C	Gas Velocity	16.4	m/s		
Type of Fuel	Natural Gas	Moisture	8.84	%	Flow Rate (Actual O2)	286582	Nm ³ /hr		
Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline	Method	Testing Location	
(1) (2) (1) (2)									

Air Testing

Total Suspended Particulate	10:40 AM - 11:28 AM	mg/m ³	0.5	<0.5	<0.5	28	60	United States Environmental Protection Agency, EPA Method 5	Bangkok
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Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf TS4 Co., Ltd.

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

Technical Management

Orawan R.

Orawan Rakyong

Scientist (3)

โทรศัพท์ 7-204-6111

Approved by

Kanokorn Auek

Kanokorn Auek

Senior Manager

โทรศัพท์ 7-204-6111

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RIGHT SOLUTIONS (RIGHT PART) THEN

13431-611 EMAIL

S:\Reports_Air Stack_Q2_2023.pr (4/28PM)



Analysis / Test Report

Client: Gulf TS4 Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GTS4

Lot ID: 2345660

Date Received : May 18, 2023

Date Reported : May 26, 2023

Report Number: 2631256-1

Page 2 of 2

Sample Number 2345660-1

Sample Date May 18, 2023

Sample Description Emission from Stationary Source

Location 11aa HIRSG 12

Date Analysis Commenced May 19, 2023

Condition of Sample Extracted into one filter paper placed in plastic petri dish

Stack Description									
Ambient Pressure	751	mmHg	3.00	m	Oxygen	14.0	%		
Ambient Temperature	37.0	°C		Circle	Carbon Dioxide	3.8	%		
Type of Process	Combustion	Stack Temperature	117	°C	Gas Velocity	16.4	m/s		
Type of Fuel	Natural Gas	Moisture	8.84	%	Flow Rate (Actual O2)	286582	Nm ³ /hr		
Analyte	Sampled Time	Unit	LOD	LOQ (LOR)	Result	Guideline	Method	Testing Location	
(1) (2) (1) (2)									

Air Testing

Total Suspended Particulate	10:40 AM - 11:28 AM	g/s	-	-	<0.04	1.8	-	Calculated	Bangkok
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Guideline :

Guideline (1) Environmental Impact Assessment Report of Gulf TS4 Co., Ltd.

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

Sampled By : Anuwat Mungpail

Remark :

- LOD : Limit of Detection

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

Technical Management

Orawan R.

Orawan Rakyong

Scientist (3)

โทรศัพท์ 7-204-6111

Approved by

Kanokorn Auek

Kanokorn Auek

Senior Manager

โทรศัพท์ 7-204-6111

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ภาคผนวก ค-3

ระดับเสียงโดยทั่วไป



Analysis / Test Report

Client : Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasit, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4
Lot ID: 2345605
Date Received : May 29, 2023
Date Reported : May 31, 2023
Report Number: 266787-1

Page 1 of 1

Sample Number	2345605-1
Parameter	Noise (Leq 24 hrs.)
Location	บริเวณพื้นที่โรงงาน
Measurement Date	May 16 - May 17, 2023
Measurement by	Jaradrawee Srinuksa
Sound Level meter	Serial No. 597168

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	59.7	69.6	58.9
03:00 PM - 04:00 PM	59.5	71.2	58.5
04:00 PM - 05:00 PM	59.6	68.3	58.6
05:00 PM - 06:00 PM	60.0	71.7	59.1
06:00 PM - 07:00 PM	60.4	68.1	59.6
07:00 PM - 08:00 PM	60.5	63.7	59.7
08:00 PM - 09:00 PM	60.3	69.2	59.7
09:00 PM - 10:00 PM	60.3	64.0	59.7
10:00 PM - 11:00 PM	60.4	64.3	59.8
11:00 PM - 12:00 AM	59.8	69.3	57.6
12:00 AM - 01:00 AM	57.9	60.0	57.5
01:00 AM - 02:00 AM	58.0	60.7	57.4
02:00 AM - 03:00 AM	57.8	59.9	57.3
03:00 AM - 04:00 AM	58.1	60.3	57.7
04:00 AM - 05:00 AM	57.9	63.1	57.5
05:00 AM - 06:00 AM	58.0	63.5	57.6
06:00 AM - 07:00 AM	61.5	74.6	58.1
07:00 AM - 08:00 AM	60.8	69.1	60.2
08:00 AM - 09:00 AM	60.7	69.4	60.0
09:00 AM - 10:00 AM	60.3	78.9	59.6
10:00 AM - 11:00 AM	60.0	65.7	59.1
11:00 AM - 12:00 PM	59.9	72.2	59.0
12:00 PM - 01:00 PM	59.4	62.9	58.4
01:00 PM - 02:00 PM	59.5	67.6	58.3

Leq Average 24 hrs. (dB(A))
Lmax (dB(A))
L90 (dB(A))
Ldn (dB(A))
Standard (dB(A))
Reference Method : ISO 1996-1 and 1996-2
Standard : 1. ใช้เกณฑ์การประเมินค่าความเข้มเสียงตามข้อกำหนด 15 (ม.ร. 2540) สำหรับพื้นที่โรงงานอุตสาหกรรม
2. ใช้เกณฑ์การประเมินค่าความเข้มเสียงตามข้อกำหนด 15 (ม.ร. 2540) สำหรับพื้นที่ชุมชน
15 (ม.ร. 2540)
Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management : Tharitak, Scientist (4)
Approved by : Supt S, Section Head

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Analysis / Test Report

Client : Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasit, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4
Lot ID: 2345605
Date Received : May 29, 2023
Date Reported : May 31, 2023
Report Number: 266788-1

Page 1 of 1

Sample Number	2345605-2
Parameter	Noise (Leq 24 hrs.)
Location	บริเวณพื้นที่โรงงาน
Measurement Date	May 17 - May 18, 2023
Measurement by	Jaradrawee Srinuksa
Sound Level meter	Serial No. 597168

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	59.5	72.2	58.5
03:00 PM - 04:00 PM	59.7	76.8	58.8
04:00 PM - 05:00 PM	59.3	73.2	58.4
05:00 PM - 06:00 PM	59.7	65.9	59.0
06:00 PM - 07:00 PM	60.3	71.6	59.6
07:00 PM - 08:00 PM	60.4	65.0	59.8
08:00 PM - 09:00 PM	60.6	63.5	59.9
09:00 PM - 10:00 PM	60.5	63.4	59.9
10:00 PM - 11:00 PM	60.5	63.2	60.0
11:00 PM - 12:00 AM	60.9	66.0	60.0
12:00 AM - 01:00 AM	60.1	62.3	59.6
01:00 AM - 02:00 AM	60.4	73.4	59.8
02:00 AM - 03:00 AM	60.6	63.0	59.9
03:00 AM - 04:00 AM	60.5	63.5	59.9
04:00 AM - 05:00 AM	60.4	62.8	59.7
05:00 AM - 06:00 AM	60.6	78.4	60.0
06:00 AM - 07:00 AM	64.5	89.5	59.0
07:00 AM - 08:00 AM	60.7	67.5	58.8
08:00 AM - 09:00 AM	60.5	71.5	58.6
09:00 AM - 10:00 AM	59.6	70.9	58.1
10:00 AM - 11:00 AM	59.3	73.0	58.1
11:00 AM - 12:00 PM	58.3	71.4	57.2
12:00 PM - 01:00 PM	58.7	75.3	57.3
01:00 PM - 02:00 PM	58.8	76.9	57.5

Leq Average 24 hrs. (dB(A))
Lmax (dB(A))
L90 (dB(A))
Ldn (dB(A))
Standard (dB(A))
Reference Method : ISO 1996-1 and 1996-2
Standard : 1. ใช้เกณฑ์การประเมินค่าความเข้มเสียงตามข้อกำหนด 15 (ม.ร. 2540) สำหรับพื้นที่โรงงานอุตสาหกรรม
2. ใช้เกณฑ์การประเมินค่าความเข้มเสียงตามข้อกำหนด 15 (ม.ร. 2540) สำหรับพื้นที่ชุมชน
15 (ม.ร. 2540)
Remark : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management : Tharitak, Scientist (4)
Approved by : Supt S, Section Head

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



TESTING
No.0042

Lot ID: 2345605

Date Received : May 29, 2023
Date Reported : May 31, 2023
Report Number: 2667789-1

Page 1 of 1



Analysis / Test Report

Client : Gulf TSI Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GT54

Sample Number	2345605-3
Parameter	Noise (Leq 24 hrs.)
Location	บริเวณพื้นที่โรงงาน
Measurement Date	May 18 - May 19, 2023
Measurement by	Jaradrawee Srinuksa
Sound Level meter	Serial No. 597168

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	59.3	72.1	58.2
03:00 PM - 04:00 PM	59.3	71.8	58.3
04:00 PM - 05:00 PM	59.2	65.3	58.4
05:00 PM - 06:00 PM	59.6	69.4	59.8
06:00 PM - 07:00 PM	60.5	67.4	59.5
07:00 PM - 08:00 PM	60.9	65.9	60.0
08:00 PM - 09:00 PM	61.1	64.6	60.3
09:00 PM - 10:00 PM	61.0	64.5	60.4
10:00 PM - 11:00 PM	61.1	69.8	60.3
11:00 PM - 12:00 AM	59.5	66.7	57.9
12:00 AM - 01:00 AM	58.3	60.3	57.9
01:00 AM - 02:00 AM	58.0	60.0	57.5
02:00 AM - 03:00 AM	58.0	60.0	57.5
03:00 AM - 04:00 AM	58.1	60.9	57.7
04:00 AM - 05:00 AM	57.8	63.8	57.2
05:00 AM - 06:00 AM	57.2	64.2	56.3
06:00 AM - 07:00 AM	60.5	70.2	58.2
07:00 AM - 08:00 AM	59.0	73.4	57.9
08:00 AM - 09:00 AM	59.8	71.0	58.3
09:00 AM - 10:00 AM	59.7	67.3	58.5
10:00 AM - 11:00 AM	59.3	72.0	58.2
11:00 AM - 12:00 PM	59.0	66.1	58.0
12:00 PM - 01:00 PM	59.0	63.5	57.8
01:00 PM - 02:00 PM	59.2	65.5	58.4

Leq Average 24 hrs. (dB(A)) 59.5

Lmax (dB(A)) 73.4

L90 (dB(A)) 58.2

Ldn (dB(A)) 65.4

Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ใช้มาตรฐานการประเมินผลกระทบสิ่งแวดล้อม ฉบับที่ 15 (พ.ศ. 2540) ที่กำหนดค่ามาตรฐานเสียงในพื้นที่ยาน

2. ใช้มาตรฐานการประเมินผลกระทบสิ่งแวดล้อม ฉบับที่ 15 (พ.ศ. 2540) ที่กำหนดค่ามาตรฐานเสียงในพื้นที่ยาน

15 ส่วน พ.ศ. 2548

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

Supt S.

Approved by

Tharitak.

Technical Management

Supot Salameh

Section Head

Thanita Kulsriwong

Scientist (4)

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13431-61/ DMAL

S. Veeraprasad, Air Noise rpt (14-04PM)



TESTING
No.0042

Lot ID: 2345605

Date Received : May 29, 2023
Date Reported : May 31, 2023
Report Number: 2667790-1

Page 1 of 1



Analysis / Test Report

Client : Gulf TSI Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GT54

Sample Number	2345605-4
Parameter	Noise (Leq 24 hrs.)
Location	บริเวณพื้นที่โรงงาน
Measurement Date	May 19 - May 20, 2023
Measurement by	Jaradrawee Srinuksa
Sound Level meter	Serial No. 597168

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	59.3	74.4	58.1
03:00 PM - 04:00 PM	59.3	75.9	58.0
04:00 PM - 05:00 PM	59.5	75.6	58.6
05:00 PM - 06:00 PM	60.0	74.1	59.1
06:00 PM - 07:00 PM	60.2	63.8	59.4
07:00 PM - 08:00 PM	60.8	64.5	59.8
08:00 PM - 09:00 PM	61.4	64.7	60.5
09:00 PM - 10:00 PM	61.4	65.0	60.6
10:00 PM - 11:00 PM	60.7	63.7	59.9
11:00 PM - 12:00 AM	61.2	66.0	59.8
12:00 AM - 01:00 AM	60.5	63.3	59.8
01:00 AM - 02:00 AM	60.5	63.7	59.9
02:00 AM - 03:00 AM	60.9	63.7	60.2
03:00 AM - 04:00 AM	61.0	64.0	60.3
04:00 AM - 05:00 AM	60.8	74.9	59.9
05:00 AM - 06:00 AM	61.1	66.4	60.1
06:00 AM - 07:00 AM	61.1	66.4	59.5
07:00 AM - 08:00 AM	59.6	77.2	58.6
08:00 AM - 09:00 AM	59.0	69.1	57.9
09:00 AM - 10:00 AM	58.9	63.3	57.7
10:00 AM - 11:00 AM	59.2	64.6	58.2
11:00 AM - 12:00 PM	58.7	69.7	57.6
12:00 PM - 01:00 PM	58.8	76.7	57.5
01:00 PM - 02:00 PM	58.7	75.5	57.5

Leq Average 24 hrs. (dB(A)) 60.2

Lmax (dB(A)) 77.2

L90 (dB(A)) 59.4

Ldn (dB(A)) 67.1

Standard (dB(A)) 70

Reference Method : ISO1996-1 and 1996-2

Standard : 1. ใช้มาตรฐานการประเมินผลกระทบสิ่งแวดล้อม ฉบับที่ 15 (พ.ศ. 2540) ที่กำหนดค่ามาตรฐานเสียงในพื้นที่ยาน

2. ใช้มาตรฐานการประเมินผลกระทบสิ่งแวดล้อม ฉบับที่ 15 (พ.ศ. 2540) ที่กำหนดค่ามาตรฐานเสียงในพื้นที่ยาน

15 ส่วน พ.ศ. 2548

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

Tharitak.

Approved by

Supt S.

Technical Management

Supot Salameh

Section Head

Thanita Kulsriwong

Scientist (4)

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13431-61/ DMAL

S. Veeraprasad, Air Noise rpt (14-04PM)



Analysis / Test Report

TESTING
No.0042

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4
Lot ID: 2345605
Date Received : May 29, 2023
Date Reported : May 31, 2023
Report Number: 2667791-1

Page 1 of 1

Sample Number	2345605-5
Parameter	Noise (Leq 24 hrs.)
Location	พื้นที่ก่อสร้าง
Measurement Date	May 20 - May 21, 2023
Measurement by	Jaradrawee Sinuksa
Sound Level meter	Serial No. 597168

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	59.0	80.4	57.8
03:00 PM - 04:00 PM	60.2	66.1	58.4
04:00 PM - 05:00 PM	60.5	67.3	59.2
05:00 PM - 06:00 PM	60.5	72.8	59.3
06:00 PM - 07:00 PM	60.5	74.2	59.7
07:00 PM - 08:00 PM	60.9	64.6	59.9
08:00 PM - 09:00 PM	61.2	64.3	60.2
09:00 PM - 10:00 PM	61.1	60.4	60.4
10:00 PM - 11:00 PM	61.0	69.9	60.3
11:00 PM - 12:00 AM	59.4	66.6	58.0
12:00 AM - 01:00 AM	58.1	60.5	57.5
01:00 AM - 02:00 AM	58.3	60.5	57.8
02:00 AM - 03:00 AM	58.3	60.8	57.8
03:00 AM - 04:00 AM	58.7	60.3	58.1
04:00 AM - 05:00 AM	58.7	69.3	57.9
05:00 AM - 06:00 AM	58.7	75.7	57.9
06:00 AM - 07:00 AM	58.2	83.3	57.5
07:00 AM - 08:00 AM	57.8	78.7	56.8
08:00 AM - 09:00 AM	57.5	79.5	56.6
09:00 AM - 10:00 AM	57.0	70.4	56.1
10:00 AM - 11:00 AM	56.6	63.9	55.7
11:00 AM - 12:00 PM	56.4	75.2	55.3
12:00 PM - 01:00 PM	56.2	74.1	55.1
01:00 PM - 02:00 PM	56.6	78.2	55.4

Leq Average 24 hrs. (dB(A))	59.1
Lmax (dB(A))	83.3
L90 (dB(A))	57.8
Ldn (dB(A))	65.4
Standard (dB(A))	70
Reference Method : ISO1996-1 and 1996-2	
Standard : 1. ใช้นิยามและวิธีการวัดตามมาตรฐาน ISO 15 (พ.ศ. 2540) สำหรับพื้นที่ก่อสร้างและพื้นที่พักอาศัย 2. ใช้นิยามและวิธีการวัดตามมาตรฐาน ISO 15 (พ.ศ. 2540) สำหรับพื้นที่ก่อสร้างและพื้นที่พักอาศัย	
หมายเหตุ : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.	

Tharitak.

Technical Management

Approved by

Supt S.

Thantana Kulsumwong

Scientist (4)

Supot Salameh

Section Head

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13431-61/EN4L

S:Wpoms_AirNoise.pdf (4.40PM)



Analysis / Test Report

TESTING
No.0042

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4
Lot ID: 2345605
Date Received : May 29, 2023
Date Reported : May 31, 2023
Report Number: 2667792-1

Page 1 of 1

Sample Number	2345605-6
Parameter	Noise (Leq 24 hrs.)
Location	พื้นที่ก่อสร้าง
Measurement Date	May 21 - May 22, 2023
Measurement by	Jaradrawee Sinuksa
Sound Level meter	Serial No. 597168

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
02:00 PM - 03:00 PM	56.6	76.9	55.2
03:00 PM - 04:00 PM	62.3	80.3	56.5
04:00 PM - 05:00 PM	60.7	88.2	59.5
05:00 PM - 06:00 PM	60.4	74.1	59.5
06:00 PM - 07:00 PM	60.3	64.4	59.6
07:00 PM - 08:00 PM	60.4	71.3	59.8
08:00 PM - 09:00 PM	60.6	63.7	60.0
09:00 PM - 10:00 PM	60.5	63.9	59.9
10:00 PM - 11:00 PM	60.9	69.7	59.8
11:00 PM - 12:00 AM	59.6	62.7	59.0
12:00 AM - 01:00 AM	59.9	62.7	59.3
01:00 AM - 02:00 AM	59.8	63.2	59.2
02:00 AM - 03:00 AM	59.6	63.0	59.1
03:00 AM - 04:00 AM	60.0	79.6	59.2
04:00 AM - 05:00 AM	60.2	76.5	59.5
05:00 AM - 06:00 AM	60.1	66.2	59.3
06:00 AM - 07:00 AM	62.9	82.8	60.0
07:00 AM - 08:00 AM	61.2	83.7	60.1
08:00 AM - 09:00 AM	60.9	72.4	60.0
09:00 AM - 10:00 AM	60.0	75.7	59.1
10:00 AM - 11:00 AM	59.9	69.0	58.8
11:00 AM - 12:00 PM	59.5	71.5	58.5
12:00 PM - 01:00 PM	60.1	74.3	59.2
01:00 PM - 02:00 PM	60.9	68.5	59.8

Leq Average 24 hrs. (dB(A))	60.4
Lmax (dB(A))	88.2
L90 (dB(A))	59.3
Ldn (dB(A))	66.9
Standard (dB(A))	70
Reference Method : ISO1996-1 and 1996-2	
Standard : 1. ใช้นิยามและวิธีการวัดตามมาตรฐาน ISO 15 (พ.ศ. 2540) สำหรับพื้นที่ก่อสร้างและพื้นที่พักอาศัย 2. ใช้นิยามและวิธีการวัดตามมาตรฐาน ISO 15 (พ.ศ. 2540) สำหรับพื้นที่ก่อสร้างและพื้นที่พักอาศัย	
หมายเหตุ : The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.	

Tharitak.

Technical Management

Approved by

Supt S.

Thantana Kulsumwong

Scientist (4)

Supot Salameh

Section Head

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13431-61/EN4L

S:Report_AirNoise.pdf (4.41PM)



Analysis / Test Report

TESTING
No.0042

Client: Gulf TSY Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand
21140
P/O : GTSY-4210500514
Date Received : May 29, 2023
Date Reported : Jun 09, 2023
Report Number: 2667802-1C6
Lot ID: 23454513

Page 1 of 1

Sample Number		2345413-8		
Parameter	Noise (Leq 24 hrs.)	Tas'taun'uggind'		
Location	May 16 - May 17, 2023	Jaradrawee Sruksa		
Measurement Date		Serial No. 734221		
Sound Level meter				
Time		Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM		59.8	96.4	51.1
12:00 PM - 01:00 PM		56.7	78.3	51.4
01:00 PM - 02:00 PM		55.5	79.0	50.2
02:00 PM - 03:00 PM		58.2	80.9	51.2
03:00 PM - 04:00 PM		55.3	77.2	50.4
04:00 PM - 05:00 PM		53.8	75.5	50.3
05:00 PM - 06:00 PM		53.0	68.8	50.2
06:00 PM - 07:00 PM		52.6	68.1	49.6
07:00 PM - 08:00 PM		51.8	69.4	51.0
08:00 PM - 09:00 PM		51.9	68.1	50.0
09:00 PM - 10:00 PM		52.2	65.8	51.1
10:00 PM - 11:00 PM		51.3	63.2	50.5
11:00 PM - 12:00 AM		50.8	67.5	49.6
12:00 AM - 01:00 AM		51.1	70.1	49.8
01:00 AM - 02:00 AM		49.5	61.2	48.0
02:00 AM - 03:00 AM		51.9	77.6	47.7
03:00 AM - 04:00 AM		58.5	84.1	50.4
04:00 AM - 05:00 AM		58.4	76.5	52.3
05:00 AM - 06:00 AM		56.4	81.4	51.0
06:00 AM - 07:00 AM		55.5	77.7	50.6
07:00 AM - 08:00 AM		55.0	71.3	50.8
08:00 AM - 09:00 AM		54.5	72.2	49.2
09:00 AM - 10:00 AM		59.1	78.7	52.9
10:00 AM - 11:00 AM		56.2	78.1	52.2

Leq Average 24 hrs. (dB(A))	55.5
Lmax (dB(A))	96.4

61.5	$L_{90} \{dB(A)\}$
61.5	$L_{dn} \{dB(A)\}$

Standard (dB(A))	70	115
------------------	----	-----

Reference Method : ISO 1556-1 and 1556-2
Standard : 1. ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (พ.ศ. 2540) เรื่องกำหนดมาตรฐานระบับเสียงโดยทั่วไป

2. ประกาศกระทรวงอุตสาหกรรม เรื่องกำหนดระดับเสียงการรบกวน และระดับเสียงฟังกิจการภายในโรงงาน
โรงงาน พ.ศ. 2548

Theresa K. Smith

Approved by _____
Approved by _____

Supat Salamin
Section Head
Scientist (A)
Ihanta Kulsumwong

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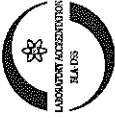
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High School Mathematics



Analysis / Test Report

TESTING
No.0042

Lot ID: 2345413

Date Received : May 29, 2023
Date Reported : Jun 09, 2023
Report Number: 2667803-106

Client : Gulf T&A Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand
21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Page 1 of 1

Sample Number	2345413-9
Parameter	Noise (Leq 24 hrs.)
Location	15m from building
Measurement Date	May 17 - May 18, 2023
Measurement by	Jaradawee Srinuksa
Sound Level meter	Serial No. 734221

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	56.7	79.7	52.6
12:00 PM - 01:00 PM	61.0	92.3	51.9
01:00 PM - 02:00 PM	54.6	71.9	49.8
02:00 PM - 03:00 PM	57.3	75.4	50.4
03:00 PM - 04:00 PM	54.8	74.7	50.1
04:00 PM - 05:00 PM	52.9	69.7	49.6
05:00 PM - 06:00 PM	54.6	71.3	51.4
06:00 PM - 07:00 PM	53.8	74.5	51.8
07:00 PM - 08:00 PM	53.8	72.7	52.5
08:00 PM - 09:00 PM	54.5	74.4	52.9
09:00 PM - 10:00 PM	53.0	68.1	51.5
10:00 PM - 11:00 PM	51.6	64.5	50.2
11:00 PM - 12:00 AM	52.1	60.8	50.9
12:00 AM - 01:00 AM	50.8	59.9	49.8
01:00 AM - 02:00 AM	50.3	61.6	48.0
02:00 AM - 03:00 AM	52.9	73.4	48.1
03:00 AM - 04:00 AM	56.5	82.2	50.6
04:00 AM - 05:00 AM	57.3	75.4	51.1
05:00 AM - 06:00 AM	56.1	75.4	51.0
06:00 AM - 07:00 AM	53.4	75.9	49.7
07:00 AM - 08:00 AM	55.8	76.5	50.1
08:00 AM - 09:00 AM	55.7	80.5	49.6
09:00 AM - 10:00 AM	60.0	81.8	53.1
10:00 AM - 11:00 AM	53.0	72.7	49.3
Leq Average 24 hrs. (dB(A))	55.5		
Lmax (dB(A))	92.3		
L90 (dB(A))			50.4
Ldn (dB(A))	60.9		
Standard (dB(A))	70	115	

Reference Method : ISO 1996-1 and 1996-2
Standard : 1. กรุงเทพมหานครและปริมณฑล ฉบับที่ 15 (พ.ศ. 2540) สำหรับพื้นที่อุตสาหกรรมและโรงงานอุตสาหกรรม
2. กรุงเทพมหานครและปริมณฑล ฉบับที่ 15 (พ.ศ. 2540) สำหรับพื้นที่ชุมชนและที่อยู่อาศัย

Technical Management

Approved by

Thantia Kulnirwong
Scientist (4)

Supat Salamech
Section Head

Supt S

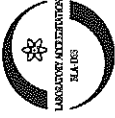
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Analysis / Test Report

TESTING
No.0042

Lot ID: 2345413

Date Received : May 29, 2023
Date Reported : Jun 09, 2023
Report Number: 2667804-106

Client : Gulf T&A Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand
21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Page 1 of 1

Sample Number	2345413-10
Parameter	Noise (Leq 24 hrs.)
Location	15m from building
Measurement Date	May 18 - May 19, 2023
Measurement by	Jaradawee Srinuksa
Sound Level meter	Serial No. 734221

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	56.3	80.0	50.9
12:00 PM - 01:00 PM	53.8	81.7	51.4
01:00 PM - 02:00 PM	56.8	77.1	49.5
02:00 PM - 03:00 PM	57.4	80.5	49.7
03:00 PM - 04:00 PM	55.4	80.4	49.3
04:00 PM - 05:00 PM	55.0	81.7	49.6
05:00 PM - 06:00 PM	54.8	78.4	50.3
06:00 PM - 07:00 PM	53.4	74.1	50.3
07:00 PM - 08:00 PM	54.3	60.7	51.2
08:00 PM - 09:00 PM	53.4	69.9	51.8
09:00 PM - 10:00 PM	53.3	71.4	52.1
10:00 PM - 11:00 PM	52.2	68.8	50.3
11:00 PM - 12:00 AM	52.9	70.9	51.8
12:00 AM - 01:00 AM	51.9	66.3	50.2
01:00 AM - 02:00 AM	49.7	65.6	47.9
02:00 AM - 03:00 AM	51.9	71.3	47.7
03:00 AM - 04:00 AM	55.5	82.6	50.3
04:00 AM - 05:00 AM	56.4	72.3	51.7
05:00 AM - 06:00 AM	55.7	73.1	50.7
06:00 AM - 07:00 AM	55.0	79.6	49.8
07:00 AM - 08:00 AM	54.3	74.1	50.0
08:00 AM - 09:00 AM	54.8	80.2	50.1
09:00 AM - 10:00 AM	53.4	81.3	52.0
10:00 AM - 11:00 AM	53.7	76.9	49.9
Leq Average 24 hrs. (dB(A))	54.9		
Lmax (dB(A))		82.6	
L90 (dB(A))			50.3
Ldn (dB(A))	60.6		
Standard (dB(A))	70	115	

Reference Method : ISO 1996-1 and 1996-2
Standard : 1. กรุงเทพมหานครและปริมณฑล ฉบับที่ 15 (พ.ศ. 2540) สำหรับพื้นที่อุตสาหกรรมและโรงงานอุตสาหกรรม
2. กรุงเทพมหานครและปริมณฑล ฉบับที่ 15 (พ.ศ. 2540) สำหรับพื้นที่ชุมชนและที่อยู่อาศัย

Technical Management

Approved by

Thantia Kulnirwong
Scientist (4)

Supat Salamech
Section Head

Supt S

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13430-61/ EMAIL



TESTING
No.0042

Lot ID: 2345413

Date Received : May 29, 2023
Date Reported : Jun 06, 2023
Report Number: 2667805-1C6

Analysis / Test Report

Client: Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phuk Daeng, Rayong Thailand
21140
P/O : GTS4-421050514
Project Name : Monitoring EIA
Project Location : GTS4

Page 1 of 1

Sample Number	2345413-11
Parameter	Noise (Leq 24 hrs.)
Location	โรงงานผู้ผลิต
Measurement Date	May 19 - May 20, 2023
Measurement by	Jandrawee Srinaka
Sound Level meter	Serial No. 734221

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	55.7	70.6	51.6
12:00 PM - 01:00 PM	65.9	90.8	51.3
01:00 PM - 02:00 PM	54.2	76.2	49.1
02:00 PM - 03:00 PM	58.3	84.0	50.3
03:00 PM - 04:00 PM	54.1	71.0	49.8
04:00 PM - 05:00 PM	65.7	93.6	48.9
05:00 PM - 06:00 PM	52.9	71.5	49.3
06:00 PM - 07:00 PM	52.5	74.0	49.5
07:00 PM - 08:00 PM	51.3	70.9	49.1
08:00 PM - 09:00 PM	50.9	68.5	49.4
09:00 PM - 10:00 PM	50.7	63.3	49.8
10:00 PM - 11:00 PM	51.0	74.3	49.0
11:00 PM - 12:00 AM	50.8	70.2	49.2
12:00 AM - 01:00 AM	50.2	65.8	48.5
01:00 AM - 02:00 AM	50.3	69.7	47.8
02:00 AM - 03:00 AM	50.9	65.8	47.9
03:00 AM - 04:00 AM	55.7	76.5	49.1
04:00 AM - 05:00 AM	56.0	83.7	49.5
05:00 AM - 06:00 AM	53.2	70.4	48.0
06:00 AM - 07:00 AM	53.5	81.4	47.7
07:00 AM - 08:00 AM	53.9	73.8	49.1
08:00 AM - 09:00 AM	53.5	71.2	47.8
09:00 AM - 10:00 AM	55.5	79.3	48.0
10:00 AM - 11:00 AM	53.3	70.6	47.9

Leq Average 24 hrs. (dB(A))	57.3
Lmax (dB(A))	93.6
L90 (dB(A))	49.1
L10 (dB(A))	60.8
Standard (dB(A))	70

Reference Method : ISO1996-1 and 1996-2
Standard : 1. ประกาศกระทรวงอุตสาหกรรม ฉบับที่ 15 (พ.ศ. 2540) เรื่องการควบคุมมาตรฐานการปล่อยเสียงจากโรงงานอุตสาหกรรม
2. ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรฐานการปล่อยเสียงจากโรงงานอุตสาหกรรม ฉบับที่ 15 (พ.ศ. 2540) เรื่องการควบคุมมาตรฐานการปล่อยเสียงจากโรงงานอุตสาหกรรม
พ.ศ. 2548

Technical Management
Tharitat.

Approved by

Supot Salameh
Section Head

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Analysis / Test Report

TESTING
No.0042

Lot ID: 2345413

Date Received : May 29, 2023
Date Reported : Jun 09, 2023
Report Number: 2667806-1C6



Client: Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phuk Daeng, Rayong Thailand
21140
P/O : GTS4-421050514
Project Name : Monitoring EIA
Project Location : GTS4

Page 1 of 1

Sample Number	2345413-12
Parameter	Noise (Leq 24 hrs.)
Location	โรงงานผู้ผลิต
Measurement Date	May 20 - May 21, 2023
Measurement by	Jandrawee Srinaka
Sound Level meter	Serial No. 734221

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	54.2	69.8	49.1
12:00 PM - 01:00 PM	53.0	69.8	48.4
01:00 PM - 02:00 PM	54.5	82.5	47.5
02:00 PM - 03:00 PM	55.1	80.9	48.8
03:00 PM - 04:00 PM	53.9	77.7	49.3
04:00 PM - 05:00 PM	53.6	75.3	49.0
05:00 PM - 06:00 PM	55.3	81.3	50.3
06:00 PM - 07:00 PM	53.0	72.7	51.2
07:00 PM - 08:00 PM	52.4	66.4	50.9
08:00 PM - 09:00 PM	52.5	73.1	50.6
09:00 PM - 10:00 PM	52.1	82.8	50.9
10:00 PM - 11:00 PM	52.0	61.5	51.2
11:00 PM - 12:00 AM	51.9	61.4	50.6
12:00 AM - 01:00 AM	50.0	59.4	48.6
01:00 AM - 02:00 AM	49.1	60.1	47.8
02:00 AM - 03:00 AM	51.2	78.7	48.0
03:00 AM - 04:00 AM	54.9	87.2	48.2
04:00 AM - 05:00 AM	52.9	76.0	48.0
05:00 AM - 06:00 AM	53.7	77.0	47.6
06:00 AM - 07:00 AM	50.5	66.6	47.1
07:00 AM - 08:00 AM	61.8	77.7	47.3
08:00 AM - 09:00 AM	55.2	82.4	47.6
09:00 AM - 10:00 AM	52.6	69.0	47.7
10:00 AM - 11:00 AM	53.5	69.2	47.2

Leq Average 24 hrs. (dB(A))	54.4
Lmax (dB(A))	87.2
L90 (dB(A))	48.4
L10 (dB(A))	59.2
Standard (dB(A))	70

Reference Method : ISO1996-1 and 1996-2
Standard : 1. ประกาศกระทรวงอุตสาหกรรม ฉบับที่ 15 (พ.ศ. 2540) เรื่องการควบคุมมาตรฐานการปล่อยเสียงจากโรงงานอุตสาหกรรม
2. ประกาศกระทรวงอุตสาหกรรม เรื่อง มาตรฐานการปล่อยเสียงจากโรงงานอุตสาหกรรม ฉบับที่ 15 (พ.ศ. 2540) เรื่องการควบคุมมาตรฐานการปล่อยเสียงจากโรงงานอุตสาหกรรม
พ.ศ. 2548

Technical Management
Tharitat.

Approved by

Supot Salameh
Section Head

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Analysis / Test Report

Client : Gulf T&A Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasil, Pluak Daeng, Rayong Thailand
21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0042

Lot ID: 2345413
Date Received : May 29, 2023
Date Reported : Jun 09, 2023
Report Number: 2667807-1C6

Page 1 of 1

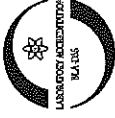
Sample Number	2345413-13
Parameter	Noise (Leq 24 hrs.)
Location	ท่าเรือท่าเรือ
Measurement Date	May 21 - May 22, 2023
Measurement by	Jaradrawee Sruksa
Sound Level meter	Serial No. 734221

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	54.6	70.8	47.9
12:00 PM - 01:00 PM	62.4	76.1	50.6
01:00 PM - 02:00 PM	54.6	74.0	49.7
02:00 PM - 03:00 PM	54.1	75.1	49.1
03:00 PM - 04:00 PM	53.9	74.0	49.5
04:00 PM - 05:00 PM	54.3	75.9	50.5
05:00 PM - 06:00 PM	53.2	75.4	50.9
06:00 PM - 07:00 PM	53.0	67.8	51.1
07:00 PM - 08:00 PM	52.6	68.9	51.4
08:00 PM - 09:00 PM	52.4	61.2	51.6
09:00 PM - 10:00 PM	52.4	77.6	50.9
10:00 PM - 11:00 PM	52.3	61.5	50.6
11:00 PM - 12:00 AM	51.7	63.4	49.8
12:00 AM - 01:00 AM	50.3	59.7	49.1
01:00 AM - 02:00 AM	51.9	74.2	48.3
02:00 AM - 03:00 AM	55.2	78.4	50.8
03:00 AM - 04:00 AM	57.9	77.3	53.1
04:00 AM - 05:00 AM	57.3	75.7	51.2
05:00 AM - 06:00 AM	54.8	76.2	50.5
06:00 AM - 07:00 AM	53.5	72.2	49.2
07:00 AM - 08:00 AM	55.0	75.5	49.3
08:00 AM - 09:00 AM	61.4	81.3	52.4
09:00 AM - 10:00 AM	54.6	71.8	49.6
10:00 AM - 11:00 AM	57.6	73.5	50.6
Leq Average 24 hrs. (dB(A))	55.8		
Lmax (dB(A))	81.3		
L90 (dB(A))			50.5
Ldn (dB(A))	61.3		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ปริมาณการปล่อยเสียงจากโรงงานอุตสาหกรรม 2. ปริมาณการปล่อยเสียงจากโรงงานอุตสาหกรรม			

Technical Management : *Tharitat.* Approved by : *Supt S.*
Thantia Kulnirung Scientist (4) Supot Salanteh Section Head

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Analysis / Test Report

Client : Gulf T&A Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasil, Pluak Daeng, Rayong Thailand
21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0042

Lot ID: 2345413
Date Received : May 29, 2023
Date Reported : Jun 09, 2023
Report Number: 2667808-1C6

Page 1 of 1

Sample Number	2345413-14
Parameter	Noise (Leq 24 hrs.)
Location	ท่าเรือท่าเรือ
Measurement Date	May 22 - May 23, 2023
Measurement by	Jaradrawee Sruksa
Sound Level meter	Serial No. 734221

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
11:00 AM - 12:00 PM	57.0	78.5	51.0
12:00 PM - 01:00 PM	56.8	76.1	50.9
01:00 PM - 02:00 PM	57.4	77.2	51.8
02:00 PM - 03:00 PM	56.4	74.5	50.1
03:00 PM - 04:00 PM	56.1	83.5	49.8
04:00 PM - 05:00 PM	53.1	68.4	50.0
05:00 PM - 06:00 PM	53.0	73.5	50.3
06:00 PM - 07:00 PM	53.5	78.2	51.1
07:00 PM - 08:00 PM	52.8	72.5	51.8
08:00 PM - 09:00 PM	52.4	66.7	51.5
09:00 PM - 10:00 PM	53.1	70.3	51.4
10:00 PM - 11:00 PM	52.5	58.0	51.7
11:00 PM - 12:00 AM	52.3	62.1	50.5
12:00 AM - 01:00 AM	50.8	68.5	49.0
01:00 AM - 02:00 AM	53.9	86.1	48.3
02:00 AM - 03:00 AM	56.2	88.7	51.3
03:00 AM - 04:00 AM	59.1	79.8	52.4
04:00 AM - 05:00 AM	56.5	75.6	50.1
05:00 AM - 06:00 PM	54.9	71.7	50.1
06:00 AM - 07:00 AM	58.9	89.9	51.3
07:00 AM - 08:00 AM	52.7	71.7	48.5
08:00 AM - 09:00 AM	58.4	81.0	52.1
09:00 AM - 10:00 AM	53.4	76.0	47.1
10:00 AM - 11:00 AM	53.2	72.2	49.0
Leq Average 24 hrs. (dB(A))	55.4		
Lmax (dB(A))		89.9	
L90 (dB(A))			50.5
Ldn (dB(A))	62.2		
Standard (dB(A))	70	115	
Reference Method : ISO1996-1 and 1996-2			
Standard : 1. ปริมาณการปล่อยเสียงจากโรงงานอุตสาหกรรม 2. ปริมาณการปล่อยเสียงจากโรงงานอุตสาหกรรม			

Technical Management : *Tharitat.* Approved by : *Supt S.*
Thantia Kulnirung Scientist (4) Supot Salanteh Section Head

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TESTING
No.0042

Lot ID: 2345413

Date Received : May 29, 2023
Date Reported : Jun 09, 2023
Report Number: 2667809-1C6

Analysis / Test Report

Client: Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand
21140
P/O : GT54-421050M514
Project Name : Monitoring EIA
Project Location : GT54

Page 1 of 1

Sample Number	2345413-15
Parameter	Noise (Leq 24 hrs.)
Location	พื้นที่บ้านพัก
Measurement Date	May 16 - May 17, 2023
Measurement by	Jarodawee Srinuksa
Sound Level meter	Serial No. 233184

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
01:00 PM - 02:00 PM	52.6	68.0	44.1
02:00 PM - 03:00 PM	53.6	69.0	45.1
03:00 PM - 04:00 PM	54.1	81.2	45.0
04:00 PM - 05:00 PM	51.6	77.1	43.0
05:00 PM - 06:00 PM	49.9	66.1	45.5
06:00 PM - 07:00 PM	48.7	70.6	44.0
07:00 PM - 08:00 PM	46.4	64.0	43.4
08:00 PM - 09:00 PM	52.3	81.1	42.9
09:00 PM - 10:00 PM	46.9	76.0	41.5
10:00 PM - 11:00 PM	45.5	69.9	42.0
11:00 PM - 12:00 AM	44.1	69.2	41.7
12:00 AM - 01:00 AM	44.3	66.3	39.7
01:00 AM - 02:00 AM	47.5	84.0	39.5
02:00 AM - 03:00 AM	46.8	64.1	39.2
03:00 AM - 04:00 AM	52.6	80.9	41.5
04:00 AM - 05:00 AM	54.8	81.0	44.8
05:00 AM - 06:00 AM	52.1	69.1	46.2
06:00 AM - 07:00 AM	52.7	74.0	45.8
07:00 AM - 08:00 AM	50.8	72.0	42.9
08:00 AM - 09:00 AM	51.8	79.7	42.2
09:00 AM - 10:00 AM	52.7	76.9	42.6
10:00 AM - 11:00 AM	49.6	70.1	42.7
11:00 AM - 12:00 PM	47.6	65.3	41.8
12:00 PM - 01:00 PM	50.5	65.6	43.9

Leq Average 24 hrs. (dB(A))	51.0
Lmax (dB(A))	84.0
L90 (dB(A))	42.9
Ldn (dB(A))	57.1
Standard (dB(A))	70
Reference Method : ISO1996-1 and 1996-2	
Standard : 1. ปริมาณการจราจรที่ผ่านจุดวัดเสียงไม่เกิน 15 (พ.ค. 2540) ซึ่งกำหนดค่ามาตรฐานเสียงในพื้นที่บ้านพัก	
2. ปริมาณการจราจรที่ผ่านจุดวัดเสียงไม่เกิน 15 (พ.ค. 2540) ซึ่งกำหนดค่ามาตรฐานเสียงในพื้นที่บ้านพัก	
โดยที่ พ.ค. 2548	

Tharitak.

Approved by

Supot Salimthi
Section Head

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TESTING
No.0042

Lot ID: 2345413

Date Received : May 29, 2023
Date Reported : Jun 09, 2023
Report Number: 2667810-1C6

Analysis / Test Report

Client: Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand
21140
P/O : GT54-421050M514
Project Name : Monitoring EIA
Project Location : GT54

Page 1 of 1

Sample Number	2345413-16
Parameter	Noise (Leq 24 hrs.)
Location	พื้นที่บ้านพัก
Measurement Date	May 17 - May 18, 2023
Measurement by	Jarodawee Srinuksa
Sound Level meter	Serial No. 233184

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
01:00 PM - 02:00 PM	51.3	80.3	43.7
02:00 PM - 03:00 PM	53.1	82.0	43.9
03:00 PM - 04:00 PM	50.2	70.6	44.8
04:00 PM - 05:00 PM	53.4	81.9	43.2
05:00 PM - 06:00 PM	48.8	68.8	44.5
06:00 PM - 07:00 PM	48.1	67.9	44.0
07:00 PM - 08:00 PM	48.2	73.6	43.8
08:00 PM - 09:00 PM	46.8	71.7	43.1
09:00 PM - 10:00 PM	44.9	66.4	42.2
10:00 PM - 11:00 PM	43.9	61.0	41.3
11:00 PM - 12:00 AM	44.2	61.9	42.5
12:00 AM - 01:00 AM	44.4	64.4	42.1
01:00 AM - 02:00 AM	47.1	69.3	41.8
02:00 AM - 03:00 AM	45.7	68.8	39.8
03:00 AM - 04:00 AM	50.0	68.9	43.1
04:00 AM - 05:00 AM	53.4	76.4	47.1
05:00 AM - 06:00 AM	52.6	75.6	46.3
06:00 AM - 07:00 AM	52.5	73.8	45.6
07:00 AM - 08:00 AM	52.3	73.7	44.6
08:00 AM - 09:00 AM	52.3	80.2	42.7
09:00 AM - 10:00 AM	52.9	77.1	42.8
10:00 AM - 11:00 AM	49.4	69.9	42.5
11:00 AM - 12:00 PM	48.7	66.4	42.9
12:00 PM - 01:00 PM	51.2	71.7	44.3

Leq Average 24 hrs. (dB(A))	50.4
Lmax (dB(A))	82.0
L90 (dB(A))	43.1
Ldn (dB(A))	56.3
Standard (dB(A))	70
Reference Method : ISO1996-1 and 1996-2	
Standard : 1. ปริมาณการจราจรที่ผ่านจุดวัดเสียงไม่เกิน 15 (พ.ค. 2540) ซึ่งกำหนดค่ามาตรฐานเสียงในพื้นที่บ้านพัก	
2. ปริมาณการจราจรที่ผ่านจุดวัดเสียงไม่เกิน 15 (พ.ค. 2540) ซึ่งกำหนดค่ามาตรฐานเสียงในพื้นที่บ้านพัก	
โดยที่ พ.ค. 2548	

Tharitak.

Approved by

Supot Salimthi
Section Head

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Analysis / Test Report

Client : Gulf TSI Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand
21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0042

Lot ID: 2345413
Date Received : May 29, 2023
Date Reported : Jun 09, 2023
Report Number: 2667811-IC6

Page 1 of 1

Sample Number	2345413-17
Parameter	Noise (Leq 24 hrs.)
Location	บริเวณใกล้ทาง
Measurement Date	May 18 - May 19, 2023
Measurement by	Jaradrawee Sruksa
Sound Level meter	Serial No. 233184

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
01:00 PM - 02:00 PM	51.6	67.0	43.1
02:00 PM - 03:00 PM	52.6	68.0	44.1
03:00 PM - 04:00 PM	53.8	80.9	44.7
04:00 PM - 05:00 PM	51.3	76.8	42.7
05:00 PM - 06:00 PM	49.6	65.8	45.2
06:00 PM - 07:00 PM	48.3	70.2	43.6
07:00 PM - 08:00 PM	46.0	63.6	43.0
08:00 PM - 09:00 PM	51.9	80.7	42.5
09:00 PM - 10:00 PM	46.7	75.8	41.3
10:00 PM - 11:00 PM	45.3	69.7	41.8
11:00 PM - 12:00 AM	43.9	69.0	41.5
12:00 AM - 01:00 AM	44.1	66.1	39.5
01:00 AM - 02:00 AM	47.3	83.8	39.3
02:00 AM - 03:00 AM	46.1	63.4	38.5
03:00 AM - 04:00 AM	51.9	80.2	40.8
04:00 AM - 05:00 AM	44.1	80.3	44.1
05:00 AM - 06:00 AM	51.4	68.4	45.5
06:00 AM - 07:00 AM	52.0	73.3	45.1
07:00 AM - 08:00 AM	51.5	72.7	43.6
08:00 AM - 09:00 AM	52.5	80.4	42.9
09:00 AM - 10:00 AM	53.4	77.6	43.3
10:00 AM - 11:00 AM	50.2	70.7	43.3
11:00 AM - 12:00 PM	48.2	65.9	42.4
12:00 PM - 01:00 PM	51.1	66.2	44.5
Leq Average 24 hrs. (dB(A))	50.7	83.8	43.0
Lmax (dB(A))			
L90 (dB(A))			43.0
Ldn (dB(A))	56.5		
Standard (dB(A))	70	115	

Reference Method : ISO1996-1 and 1996-2
Standard : 1. กรุงเทพมหานครและปริมณฑล ฉบับที่ 15 (พ.ศ. 2540) มาตรฐานการควบคุมระดับเสียงรบกวน
2. กรุงเทพมหานครและปริมณฑล มาตรฐานการควบคุมระดับเสียงรบกวน ฉบับที่ 15 (พ.ศ. 2540) มาตรฐานการควบคุมระดับเสียงรบกวน

Technical Management

Approved by

Thantia Kulsumwong
Scientist (4)

Supot Salantich
Section Head

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Tharitat K.

Approved by

Thantia Kulsumwong
Scientist (4)

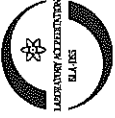
Supot Salantich
Section Head

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13430-61/ EMAIL



Analysis / Test Report

Client : Gulf TSI Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand
21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0042

Lot ID: 2345413
Date Received : May 29, 2023
Date Reported : Jun 09, 2023
Report Number: 2667812-IC6

Page 1 of 1

Sample Number	2345413-18
Parameter	Noise (Leq 24 hrs.)
Location	บริเวณใกล้ทาง
Measurement Date	May 19 - May 20, 2023
Measurement by	Jaradrawee Sruksa
Sound Level meter	Serial No. 233184

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
01:00 PM - 02:00 PM	51.9	80.9	44.3
02:00 PM - 03:00 PM	53.7	82.6	44.5
03:00 PM - 04:00 PM	50.8	71.2	45.4
04:00 PM - 05:00 PM	54.0	82.5	43.8
05:00 PM - 06:00 PM	49.4	69.4	45.1
06:00 PM - 07:00 PM	48.3	68.1	44.2
07:00 PM - 08:00 PM	48.4	73.8	44.0
08:00 PM - 09:00 PM	47.0	71.9	43.3
09:00 PM - 10:00 PM	45.1	66.6	42.4
10:00 PM - 11:00 PM	44.1	62.0	41.5
11:00 PM - 12:00 AM	44.5	62.0	42.6
12:00 AM - 01:00 AM	47.2	69.4	41.1
01:00 AM - 02:00 AM	46.0	69.1	40.1
02:00 AM - 03:00 AM	50.3	69.2	43.4
03:00 AM - 04:00 AM	53.7	76.7	47.4
04:00 AM - 05:00 AM	52.9	75.9	46.6
05:00 AM - 06:00 AM	52.8	74.1	45.9
06:00 AM - 07:00 AM	52.1	73.3	44.2
07:00 AM - 08:00 AM	51.9	79.8	42.3
08:00 AM - 09:00 AM	52.5	76.7	42.4
09:00 AM - 10:00 AM	49.0	69.5	42.1
10:00 AM - 11:00 AM	48.3	66.0	42.5
11:00 AM - 12:00 PM	50.8	71.3	43.9
12:00 PM - 01:00 PM	50.6		
Leq Average 24 hrs. (dB(A))	50.6	82.6	43.4
Lmax (dB(A))			
L90 (dB(A))	56.5		
Ldn (dB(A))	70	115	
Standard (dB(A))			

Reference Method : ISO1996-1 and 1996-2
Standard : 1. กรุงเทพมหานครและปริมณฑล ฉบับที่ 15 (พ.ศ. 2540) มาตรฐานการควบคุมระดับเสียงรบกวน
2. กรุงเทพมหานครและปริมณฑล มาตรฐานการควบคุมระดับเสียงรบกวน ฉบับที่ 15 (พ.ศ. 2540) มาตรฐานการควบคุมระดับเสียงรบกวน

Technical Management

Approved by

Thantia Kulsumwong
Scientist (4)

Supot Salantich
Section Head

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Tharitat K.

Approved by

Thantia Kulsumwong
Scientist (4)

Supot Salantich
Section Head

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TESTING
No.0042

Lot ID: 2345413

Date Received : May 29, 2023
Date Reported : Jun 09, 2023
Report Number: 2667813-1C6

Page 1 of 1



Analysis / Test Report

Client: Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand
21140
P/O : GT54-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Sample Number	2345413-19
Parameter	Noise (Leq 24 hrs.)
Location	พื้นที่หน้างาน
Measurement Date	May 20 - May 21, 2023
Measurement by	Jardrawee Sirulsa
Sound Level meter	Serial No. 233184

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
01:00 PM - 02:00 PM	52.2	67.6	43.7
02:00 PM - 03:00 PM	53.2	68.6	44.7
03:00 PM - 04:00 PM	54.4	81.5	45.3
04:00 PM - 05:00 PM	51.9	77.4	43.3
05:00 PM - 06:00 PM	50.6	66.8	46.2
06:00 PM - 07:00 PM	49.3	71.2	44.6
07:00 PM - 08:00 PM	47.0	64.6	44.0
08:00 PM - 09:00 PM	52.9	81.7	43.5
09:00 PM - 10:00 PM	47.7	76.8	42.3
10:00 PM - 11:00 PM	45.5	69.9	42.0
11:00 PM - 12:00 AM	44.1	69.2	41.7
12:00 AM - 01:00 AM	44.3	66.3	39.7
01:00 AM - 02:00 AM	47.5	84.0	39.5
02:00 AM - 03:00 AM	46.3	63.6	38.7
03:00 AM - 04:00 AM	52.1	80.4	41.0
04:00 AM - 05:00 AM	54.5	80.7	44.5
05:00 AM - 06:00 AM	51.8	68.8	45.9
06:00 AM - 07:00 AM	52.4	73.7	45.5
07:00 AM - 08:00 AM	51.9	73.1	44.0
08:00 AM - 09:00 AM	52.9	80.8	43.3
09:00 AM - 10:00 AM	52.6	76.8	42.5
10:00 AM - 11:00 AM	49.4	69.9	42.5
11:00 AM - 12:00 PM	65.1	87.4	41.6
12:00 PM - 01:00 PM	50.3	65.4	43.7

Leq Average 24 hrs. (dB(A))	51.0
Lmax (dB(A))	84.0
L90 (dB(A))	43.3
L01 (dB(A))	
L05 (dB(A))	
Standard (dB(A))	70

Reference Method : ISO1996-1 and 1996-2
Standard : 1. ประกาศกระทรวงอุตสาหกรรม เรื่อง ค่ามาตรฐานการวัดระดับเสียงในชุมชน พ.ศ. 2540
2. ประกาศกระทรวงอุตสาหกรรม เรื่อง ค่ามาตรฐานการวัดระดับเสียงในชุมชน พ.ศ. 2548

Tharitak.

Approved by

Thanita Kulsumwong
Scientist (4)

Supot Salameeth
Section Head

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1343-61/EMAIL



TESTING
No.0042

Lot ID: 2345413

Date Received : May 29, 2023
Date Reported : Jun 09, 2023
Report Number: 2667814-1C6

Page 1 of 1



Analysis / Test Report

Client: Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand
21140
P/O : GT54-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Sample Number	2345413-20
Parameter	Noise (Leq 24 hrs.)
Location	พื้นที่หน้างาน
Measurement Date	May 21 - May 22, 2023
Measurement by	Jardrawee Sirulsa
Sound Level meter	Serial No. 233184

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
01:00 PM - 02:00 PM	53.1	82.1	45.5
02:00 PM - 03:00 PM	54.9	83.8	45.7
03:00 PM - 04:00 PM	52.0	72.4	46.6
04:00 PM - 05:00 PM	55.2	83.7	45.0
05:00 PM - 06:00 PM	50.6	70.6	46.3
06:00 PM - 07:00 PM	48.9	68.7	44.8
07:00 PM - 08:00 PM	49.0	74.4	44.6
08:00 PM - 09:00 PM	47.6	72.5	43.9
09:00 PM - 10:00 PM	45.7	67.2	43.0
10:00 PM - 11:00 PM	44.7	61.8	42.1
11:00 PM - 12:00 AM	45.4	62.9	43.5
12:00 AM - 01:00 AM	45.2	65.4	43.1
01:00 AM - 02:00 AM	46.9	70.3	42.0
02:00 AM - 03:00 AM	48.1	70.0	41.0
03:00 AM - 04:00 AM	51.2	70.1	44.3
04:00 AM - 05:00 AM	54.8	77.8	48.5
05:00 AM - 06:00 AM	54.0	77.0	47.7
06:00 AM - 07:00 AM	53.9	75.2	47.0
07:00 AM - 08:00 AM	53.2	74.4	45.3
08:00 AM - 09:00 AM	53.0	80.9	43.4
09:00 AM - 10:00 AM	52.9	77.1	42.8
10:00 AM - 11:00 AM	49.4	69.9	42.5
11:00 AM - 12:00 PM	48.7	66.4	42.9
12:00 PM - 01:00 PM	51.2	71.7	44.3

Leq Average 24 hrs. (dB(A))	51.5
Lmax (dB(A))	83.8
L90 (dB(A))	44.3
L01 (dB(A))	
L05 (dB(A))	
Standard (dB(A))	70

Reference Method : ISO1996-1 and 1996-2
Standard : 1. ประกาศกระทรวงอุตสาหกรรม เรื่อง ค่ามาตรฐานการวัดระดับเสียงในชุมชน พ.ศ. 2540
2. ประกาศกระทรวงอุตสาหกรรม เรื่อง ค่ามาตรฐานการวัดระดับเสียงในชุมชน พ.ศ. 2548

Tharitak.

Approved by

Thanita Kulsumwong
Scientist (4)

Supot Salameeth
Section Head

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1343-61/EMAIL



Analysis / Test Report



TESTING
No.0042

Lot ID: 2345413

Date Received : May 29, 2023
Date Reported : Jun 09, 2023
Report Number: 2667815-1C6

Client : Gulf T&E Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasil, Pluak Daeng, Rayong Thailand
21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Page 1 of 1

Sample Number	2345413-21
Parameter	Noise (Leq 24 hrs.)
Location	บริเวณหน้างาน
Measurement Date	May 22 - May 23, 2023
Measurement by	Jaradwee Simksa
Sound Level meter	Serial No. 233184

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
01:00 PM - 02:00 PM	52.6	68.0	44.1
02:00 PM - 03:00 PM	53.6	69.0	45.1
03:00 PM - 04:00 PM	54.8	81.9	45.7
04:00 PM - 05:00 PM	52.3	77.8	43.7
05:00 PM - 06:00 PM	51.0	67.2	46.6
06:00 PM - 07:00 PM	49.7	71.6	45.0
07:00 PM - 08:00 PM	47.4	65.0	44.4
08:00 PM - 09:00 PM	52.7	81.5	43.3
09:00 PM - 10:00 PM	47.5	76.6	42.1
10:00 PM - 11:00 PM	45.3	69.7	41.8
11:00 PM - 12:00 AM	43.9	69.0	41.5
12:00 AM - 01:00 AM	44.1	66.1	39.5
01:00 AM - 02:00 AM	47.3	83.8	39.3
02:00 AM - 03:00 AM	47.3	64.6	39.7
03:00 AM - 04:00 AM	53.1	81.4	42.0
04:00 AM - 05:00 AM	55.5	81.7	45.5
05:00 AM - 06:00 AM	52.8	69.8	46.9
06:00 AM - 07:00 AM	53.4	74.7	46.5
07:00 AM - 08:00 AM	52.9	74.1	45.0
08:00 AM - 09:00 AM	53.9	81.8	44.3
09:00 AM - 10:00 AM	52.2	76.4	42.1
10:00 AM - 11:00 AM	49.0	69.5	42.1
11:00 AM - 12:00 PM	47.0	64.7	41.2
12:00 PM - 01:00 PM	49.9	65.0	43.3
Leq Average 24 hrs. (dB(A))	51.5	83.8	
Lmax (dB(A))			43.3
L90 (dB(A))			
Ldn (dB(A))	57.6		
Standard (dB(A))	70	115	

Reference Method : ISO1996-1 and 1996-2
Standard : 1. ใช้มาตรฐานการควบคุมเสียงรบกวน ฉบับที่ 15 (พ.ศ. 2540) สำหรับการประเมินเสียงในชุมชน
2. ใช้มาตรฐานการควบคุมเสียงรบกวน สำหรับการประเมินเสียงจากทางบก การจราจรทางบก และเสียงจากอาคารโรงงานอุตสาหกรรม
วันที่ 15 มิ.ย. 2548

Technical Management : Thanitak. Approved by : Sept S.
Thantia Kulsumwong Scientist (4) Suport Sallamteah Section Head

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ภาคผนวก ค-4

คุณภาพน้ำทิ้งจากกระบวนการผลิต



Analysis / Test Report

Client : Gulf TS4 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasit, Pluak Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0042
Lot ID: 22154225
Date Received : Jan 04, 2023
Date Reported : Jan 12, 2023
Report Number : 2530670-1

Page 1 of 2

Sample Number	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Color (at Original pH)	ADMI	-	5	16	≤600	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	15	≤600	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Oil & Grease *	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C *		-	-	7.7	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	-	-	26.6	≤45	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	156	≤3000	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	-	5	7	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampling By : Palhompong Komsawat นพดรุณชาติ 3-323-9-9468

Remark :
- LOD : Limit of Detection

Technical Management
N. Banphit
Narumon Banchongkit
Supervisor
นพดรุณชาติ 3-323-9-9445

Approved by
D. Chanchon
Dej Chanchon
Senior Manager
นพดรุณชาติ 3-323-9-9442

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1301161 (THA)

S:\Report\ALG\01 (11-5749)

Analysis / Test Report

Client : Gulf TS4 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasit, Pluak Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0042
Lot ID: 22154225
Date Received : Jan 04, 2023
Date Reported : Jan 12, 2023
Report Number : 2530670-1

Page 2 of 2

* "<" : 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
นพดรุณชาติ 3-323-9-9445

Approved by
D. Chanchon
Dej Chanchon
Senior Manager
นพดรุณชาติ 3-323-9-9442

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RIGHT SOLUTIONS

1301161 (THA)

S:\Report\ALG\01 (11-5749)



Analysis / Test Report

Client : Gulf T&A Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tassit, Pluak Daeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0042
Lot ID: 2310361

Date Received : Feb 06, 2023
Date Reported : Feb 13, 2023
Report Number : 2553646-1

Page 1 of 2

Sample Number	2310361-1
Sample Date	Feb 06, 2023 11:10 AM
Sample Description	Wastewater
Location	พื้นที่บำบัดน้ำ
Date Analysis Commenced	Feb 06, 2023
Condition of Sample	Contained in one amber glass bottle and two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Color (at Original pH)	ADMI	-	5	16	≤600	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	15	≤600	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Oil & Grease *	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C *		-	-	7.6	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	-	-	28.5	≤45	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	212	≤3000	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	-	5	<5	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central

wastewater Treatment Plant
Sampling By : Nannat thammassaro รหัสประจำตัว 7-323-9-9477

Remark :
- LOD : Limit of Detection

Technical Management

N. Banphat
Nannat Banchoangkit
Supervisor
รหัสประจำตัว 7-323-9-9445

Approved by

D. Jamsai
Dej Changchon
Senior Manager
รหัสประจำตัว 7-323-9-9442

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1301 6/1 (M4L)

5.18 (m4L)_AL_GS-01 (4.30PH)

Analysis / Test Report

Client : Gulf T&A Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tassit, Pluak Daeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0042
Lot ID: 2310361

Date Received : Feb 06, 2023
Date Reported : Feb 13, 2023
Report Number : 2553646-1

Page 2 of 2

* -< : Lower than LOQ (Limit of Quantitation) / LOD (Limit of Reporting)
* Available method : 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. Banphat
Nannat Banchoangkit
Supervisor
รหัสประจำตัว 7-323-9-9445

Approved by

D. Jamsai
Dej Changchon
Senior Manager
รหัสประจำตัว 7-323-9-9442

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1301 6/1 (M4L)

5.18 (m4L)_AL_GS-01 (4.30PH)



Analysis / Test Report

Client : Gulf T&A Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tassit, Pluak Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0042
Lot ID: 2324200
Date Received : Mar 08, 2023
Date Reported : Mar 15, 2023
Report Number : 2586176-1

Page 1 of 2

Sample Number	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	4.1	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Color (at Original pH)	ADMI	-	5	11	≤600	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	9	≤600	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Oil & Grease *	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C *	-	-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (F)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	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	200	≤3000	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	-	5	12	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampling By : Pathompong Komsawat รหัสประจำตัว ๓-323-๙-9468

Remark :
- LOD : Limit of Detection

Technical Management : N. Banphit
Narumon Bandhongkit
Supervisor
รหัสประจำตัว ๓-323-๙-9445
Approved by : D. Chanchon
Dej Chanchon
Senior Manager
รหัสประจำตัว ๓-323-๙-9442

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RIGHT SOLUTIONS

13931 616/PMR

S:\Report\AL_Git\m1 (2.0259)

Analysis / Test Report

Client : Gulf T&A Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tassit, Pluak Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0042
Lot ID: 2324200
Date Received : Mar 08, 2023
Date Reported : Mar 15, 2023
Report Number : 2586176-1

Page 2 of 2

- "<" : 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 Bandhongkit
Supervisor
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Approved by : D. Chanchon
Dej Chanchon
Senior Manager
รหัสประจำตัว ๓-323-๙-9442

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RIGHT SOLUTIONS

13931 616/PMR

S:\Report\AL_Git\m1 (2.0259)



Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140

P/O : Project Name : Monitoring EIA

Project Location : GT54

TESTING
No.0042
Lot ID: 2335569

Date Received : Apr 03, 2023
Date Reported : Apr 10, 2023
Report Number : 2608150-1

Page 1 of 2

Sample Number	2335569-1
Sample Date	Apr 03, 2023 11:30 AM
Sample Description	Wastewater
Location	หน่วยบำบัดน้ำ
Date Analysis Commenced	Apr 03, 2023
Condition of Sample	Contained in one amber glass bottle and two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Color (at Original pH)	ADMI	-	5	20	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	18	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Oil & Grease *	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
pH at 25 degree C *		-	-	7.6	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	-	-	31.0	≤45	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	60	≤3000	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	-	5	14	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central

Wastewater Treatment Plant

Sampling By : Pabonpong Komsawat รหัสผู้เก็บ 3-323-9-9468

Remark :

LOD : Limit of Detection

Technical Management

N. Banphit
Narumon Banchoangkit
Supervisor
รหัสผู้เก็บ 3-323-9-9445

Approved by

D. Changchon
Dej Changchon
Senior Manager
รหัสผู้เก็บ 3-323-9-9442

Technical Management

N. Banphit
Narumon Banchoangkit
Supervisor
รหัสผู้เก็บ 3-323-9-9445

Approved by

D. Changchon
Dej Changchon
Senior Manager
รหัสผู้เก็บ 3-323-9-9442

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1343145/ENMR

RIGHT SOLUTIONS RIGHT PARTNER

S. Jaisriwattana, M.Sc. (1.148P)

Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140

P/O : Project Name : Monitoring EIA

Project Location : GT54

TESTING
No.0042
Lot ID: 2335569

Date Received : Apr 03, 2023
Date Reported : Apr 10, 2023
Report Number : 2608150-1

Page 2 of 2

- Lower than LOQ (Limit of Quantitation) / LOQ (Limit of Reporting)
- Analyte(s) marked * (if not included in scope of Accreditation ISO/IEC 17025)
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1343145/ENMR

RIGHT SOLUTIONS RIGHT PARTNER

S. Jaisriwattana, M.Sc. (1.148P)



Analysis / Test Report

Client : Gulf TSC Co., Ltd.
87 M-Thai Tower All Season Place, 11th Floor, Wireless Road, Lumpini, Pathumwan,
Bangkok Thailand 10330
P/O : GT54-4210500514
Project Name : Monitoring EIA
Project Location: GT54

TESTING
No.0042
Lot ID: 2345824

Date Received : May 03, 2023
Date Reported : May 15, 2023
Report Number : 2631408-1 C6-1

Page 1 of 2

Analyte	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Color (at Original pH)	ADMI	-	5	15	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	14	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Oil & Grease *	mg/L	-	3	<3	≤10	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	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	-	-	33.4	≤45	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	192	≤3000	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	-	5	7	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Naruait Uthanasaro , Samart Khumphlee

Remark :
* LOD : Limit of Detection

Technical Management
N. Banphit
Narumon Banchongkit
Supervisor
โทรศัพท์ 3-323-9-9445

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

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Analysis / Test Report

Client : Gulf TSC Co., Ltd.
87 M-Thai Tower All Season Place, 11th Floor, Wireless Road, Lumpini, Pathumwan,
Bangkok Thailand 10330
P/O : GT54-4210500514
Project Name : Monitoring EIA
Project Location: GT54

TESTING
No.0042
Lot ID: 2345824

Date Received : May 03, 2023
Date Reported : May 15, 2023
Report Number : 2631408-1 C6-1

Page 2 of 2

* "<" : Lower than 100 (Limit of Quantitation) / LOD (Limit of Reporting)
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Technical Management
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Narumon Banchongkit
Supervisor
โทรศัพท์ 3-323-9-9445

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

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Client : Gulf TSI Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasit, Pluak Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Sample Number 235653-1

Sample Date Jun 02, 2023 10:55 AM

Sample Description Wastewater

Location บ้านหินจันทร์

Date Analysis Commenced Jun 02, 2023

Condition of Sample Contained in one amber glass 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							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
Color (at Original pH)	ADMI	-	5	15	≤600	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	13	≤600	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Oil & Grease *	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH at 25 degree C *		-	-	7.4	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	-	-	35.3	≤45	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	112	≤3000	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	-	5	7	≤200	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampling By : Naruot Udommasaro รหัสงาน 7-323-9-9477

Remark :

Technical Management

N. Banphit

Narumon Banchoangkit
Supervisor
รหัสงาน 7-323-9-9445

Approved by

D. Jansu

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

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Analysis / Test Report

Client : Gulf TSI Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasit, Pluak Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4

LOD : Limit of Detection

- < : Lower than LOQ (Limit of Quantification) / LOQ (Limit of Reporting)
- Analytes marked * : 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.

TESTING

No.0042

Lot ID: 2356653

Date Received : Jun 02, 2023

Date Reported : Jun 10, 2023

Report Number : 2655102-1





Analysis / Test Report

Client : Gulf TSC Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Plak Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GT54

TESTING
No.0042
Lot ID: 2345824
Date Received : May 03, 2023
Date Reported : May 12, 2023
Report Number : 2631408-1

Page 1 of 2

Sample Number	2345824-1
Sampled Date	May 03, 2023 11:00 AM
Sample Description	Wastewater
Location	เขตกักเก็บน้ำ
Date Analysis Commenced	May 03, 2023
Condition of Sample	Contained in two glass vials, three amber glass bottles and ten 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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	15	≤600	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	14	≤600	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cyanide as CN *	mg/L	0.001	0.005	Not Detected	≤0.2	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-C (C)	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed., 2004	Rayong
Oil & Grease *	mg/L	-	3	<3	≤10	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	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Phenol	mg/L	0.005	0.01	0.01	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5530 D	Rayong

Technical Management
N. Banphit
Nanamon Banchoangkit
Supervisor
โทรศัพท์ : 323-9-9445

Approved by
Dej Changchon
Senior Manager
โทรศัพท์ : 323-9-9442

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Analysis / Test Report

Client : Gulf TSC Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Plak Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GT54

TESTING
No.0042
Lot ID: 2345824
Date Received : May 03, 2023
Date Reported : May 12, 2023
Report Number : 2631408-1

Page 2 of 2

Sample Number	2345824-1
Sampled Date	May 03, 2023 11:00 AM
Sample Description	Wastewater
Location	เขตกักเก็บน้ำ
Date Analysis Commenced	May 03, 2023
Condition of Sample	Contained in two glass vials, three amber glass bottles and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	33.4	≤45	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	192	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	8.3	≤100	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampling By : Nanat thammassaro โทรศัพท์ : 323-9-9477, Sumart Khumplee โทรศัพท์ : 204-9-7830
Remark :
• LOD : Limit of Detection
• "<" : Lower than LOQ (Limit of Quantization) / LOR (Limit of Reporting)
• Analyte(s) marked * : Is/are not included in scope of Accredited ISO/IEC 17025.
• The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management
N. Banphit
Nanamon Banchoangkit
Supervisor
โทรศัพท์ : 323-9-9445

Approved by
Dej Changchon
Senior Manager
โทรศัพท์ : 323-9-9442

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Analysis / Test Report

Client : Gulf TSC Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0009
Lot ID: 2345824
Date Received : May 03, 2023
Date Reported : May 12, 2023
Report Number : 2631408-2

Page 1 of 5

Sample Number	2345824-1
Sample Date	May 03, 2023 11:00 AM
Sample Description	Wastewater
Location	บริเวณน้ำทิ้ง
Date Analysis Commenced	May 05, 2023
Condition of Sample	Contained in two glass vials, three amber glass bottles and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.06	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.094	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.0010	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.0003	0.0005	0.06	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Technical Management

Siriluk P.

Approved by

Kanokorn Anek

Senior Manager

โทรศัพท์ 7-204-4-6111

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13/01/67 (HAL)

S. REPORT/AL-GL-041 (4.12PM)



Analysis / Test Report

Client : Gulf TSC Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0009
Lot ID: 2345824
Date Received : May 03, 2023
Date Reported : May 12, 2023
Report Number : 2631408-2

Page 2 of 5

Sample Number	2345824-1
Sample Date	May 03, 2023 11:00 AM
Sample Description	Wastewater
Location	บริเวณน้ำทิ้ง
Date Analysis Commenced	May 05, 2023
Condition of Sample	Contained in two glass vials, three amber glass bottles and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.002	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	0.001	≤0.02	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.15	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Pesticides - Organochlorine Group							
2,4-DDD *	ug/L	0.01	0.02	Not Detected	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
2,4-DDE *	ug/L	0.01	0.02	Not Detected	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
2,4-DDT *	ug/L	0.01	0.02	Not Detected	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok

Technical Management

Siriluk P.

Approved by

Kanokorn Anek

Senior Manager

โทรศัพท์ 7-204-4-6111

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13/01/67 (HAL)

S. REPORT/AL-GL-041 (4.12PM)



Client : Gulf T&A Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasit, Pluek Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location: GTS4

Analysis / Test Report

TESTING
No.0009
Lot ID: 2345824
Date Received : May 03, 2023
Date Reported : May 12, 2023
Report Number : 2631408-2



Page 3 of 5

Sample Number 2345824-1
Sampled Date May 03, 2023 11:00 AM
Sample Description Wastewater
Location ไร่แก้วหินทราย
Date Analysis Commenced May 05, 2023
Condition of Sample Contained in two glass vials, three amber glass bottles and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Pesticides - Organochlorine Group							
4,4'-DDO *	ug/L	0.01	0.02	Not Detected	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
4,4'-DDE *	ug/L	0.01	0.02	Not Detected	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
4,4'-DDT *	ug/L	0.01	0.02	Not Detected	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Aldrin *	ug/L	0.01	0.02	Not Detected	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
alpha-BHC *	ug/L	0.01	0.02	Not Detected	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
beta-BHC *	ug/L	0.01	0.02	Not Detected	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok

Technical Management

Siriluk P.

Supervisor
วิรัตน์ 7-204-4-4720

Approved by

Kanokkorn Anek

Senior Manager
วิรัตน์ 7-204-4-6111

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RIGHT SOLUTIONS ปรึกษา 7-204-4-6111

1931 661 (MAL)

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Client : Gulf T&A Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasit, Pluek Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location: GTS4

Analysis / Test Report

TESTING
No.0009
Lot ID: 2345824
Date Received : May 03, 2023
Date Reported : May 12, 2023
Report Number : 2631408-2



Page 4 of 5

Sample Number 2345824-1
Sampled Date May 03, 2023 11:00 AM
Sample Description Wastewater
Location ไร่แก้วหินทราย
Date Analysis Commenced May 05, 2023
Condition of Sample Contained in two glass vials, three amber glass bottles and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Pesticides - Organochlorine Group							
Chlordane *	ug/L	0.02	0.04	Not Detected	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
delta-BHC *	ug/L	0.01	0.02	Not Detected	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Dieldrin *	ug/L	0.01	0.02	Not Detected	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Endosulfan I *	ug/L	0.01	0.02	Not Detected	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Endosulfan II *	ug/L	0.01	0.02	Not Detected	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Endrin *	ug/L	0.01	0.02	Not Detected	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok

Technical Management

Siriluk P.

Supervisor
วิรัตน์ 7-204-4-4720

Approved by

Kanokkorn Anek

Senior Manager
วิรัตน์ 7-204-4-6111

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RIGHT SOLUTIONS ปรึกษา 7-204-4-6111

1931 661 (MAL)

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Client : Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Analysis / Test Report

TESTING
No.0009
Lot ID: 2345824
Date Received : May 03, 2023
Date Reported : May 12, 2023
Report Number : 2631408-2

Page 5 of 5

Sample Number	2345824-1
Sample Date	May 03, 2023 11:00 AM
Sample Description	Wastewater
Location	พื้นที่เก็บน้ำ
Date Analysis Commenced	May 05, 2023
Condition of Sample	Contained in two glass vials, three amber glass bottles and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Pesticides - Organochlorine Group						
Heptachlor *	ug/L	0.01	0.02	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Heptachlor-Epoxide *	ug/L	0.01	0.02	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Lindane (gamma-BHC) *	ug/L	0.01	0.02	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Methoxychlor *	ug/L	0.01	0.02	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampling By : Nanut thammassaro รหัสประจำตัว 3-323-9-9477 , Samart Khumplue รหัสประจำตัว 3-204-9-7830

Remark :
• LOD : Limit of Detection
• %C : Lower than LOD (Limit of Quantitation) / LOR (Limit of Reporting)
• Analyte(s) marked * : 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

Siriluk P.
Supervisor
รหัสประจำตัว 3-204-9-4720

Approved by

Kanokorn Anek
Senior Manager
รหัสประจำตัว 3-204-9-6111

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RIGHT SOLUTIONS FOR A BETTER FUTURE

13031-67 (Rev.1)

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Client : Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Analysis / Test Report

TESTING
No.0042
Lot ID: 2345824
Date Received : May 03, 2023
Date Reported : May 12, 2023
Report Number : 2631408-3

Page 1 of 2

Sample Number	2345824-1
Sample Date	May 03, 2023 11:00 AM
Sample Description	Wastewater
Location	พื้นที่เก็บน้ำ
Date Analysis Commenced	May 04, 2023
Condition of Sample	Contained in two glass vials, three amber glass bottles and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Metals Testing						
(M) Iron	mg/L	0.003	0.005	≤10.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
(M) Silver	mg/L	0.0003	0.0005	Not Detected	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Pesticides - Organochlorine Group						
alpha-Chlordane *	ug/L	0.01	0.02	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
gamma-Chlordane *	ug/L	0.01	0.02	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Hexachlorobenzene *	ug/L	0.01	0.02	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Mirex *	ug/L	0.01	0.02	Not Detected	In-house method : STM 04-101 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok

Water Testing

Approved by

N. Bangpit
Harunon Bandhongkhit
Supervisor

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RIGHT SOLUTIONS FOR A BETTER FUTURE

13031-67 (Rev.1)

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Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Plak Deeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring ELA
Project Location: GTS4

TESTING
No.0042
Lot ID: 2345824
Date Received : May 03, 2023
Date Reported : May 12, 2023
Report Number : 2631408-3

Page 2 of 2

Sample Number	2345824-1						
Sampled Date	May 03, 2023 11:00 AM						
Sample Description	Wastewater						
Location	ตำบลน้ำพี้ธรรมชาติ						
Date Analysis Commenced	May 04, 2023						
Condition of Sample	Contained in two glass vials, three amber glass bottles and ten plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Anionic Surfactant as MBAS *	mg/L	0.015	0.05	<0.05	≤30	Based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5510 B, C	Bangkok
Chloride as Cl *	mg/L	0.5	1	53	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (D)	Rayong
Fluoride	mg/L	0.05	0.2	0.2	≤5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (C)	Rayong
Odour *		.	.	Odourless	Non Objectionable	TIS, 257-2549	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampling By : Naruol thamasaro , Samart Khumplhiee

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.
[A] Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, DSS Accreditation No. 0009.
The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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Approved by
N. Banphit
Nanamon Banphongkit
Supervisor

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ภาคผนวก ค-5

คุณภาพน้ำที่ระบายจากหอหล่อเย็น



Analysis / Test Report

Client : Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

TESTING

Lot ID: 22154226
No. 0042
Date Received : Jan 04, 2023
Date Reported : Jan 12, 2023
Report Number : 2530671-1

Page 1 of 1

Sample Number	22154226-1
Sampled Date	Jan 04, 2023 10:45 AM
Sample Description	Wastewater
Location	พื้นที่ขุดลอก
Date Analysis Commenced	Jan 04, 2023
Condition of Sample	Contained in one 800 bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Water Testing								
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤20	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Color (at Original pH)	ADNI	-	5	17	≤300	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADNI	-	5	17	≤300	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
pH at 25 degree C *	-	-	-	8.0	5.5-9.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.0	≤40	≤34	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	936	≤3000	≤1300	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 105-105 degree C	mg/L	-	5	<5	≤50	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Guideline (1) : 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).
Guideline (2) : Environmental Impact Assessment Report of Gulf T54 Co., Ltd.

Sampling By : Pathompong Komsawat รหัสประจำตัว 3-323-9-9468 , Jakkarin Manwicha รหัสประจำตัว 3-204-9-8587

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Unit of Quantification) / LOR (Unit 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 Banchojkit
Supervisor
รหัสประจำตัว 3-323-9-9445

Approved by

D. Chonchon
Dej Chonchon
Senior Manager
รหัสประจำตัว 3-323-9-9442

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1301-601 ENR

S. (Report)_AL_2021-01 (6.23P4)



Analysis / Test Report

Client : Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 22154226
Date Received : Jan 04, 2023
Date Reported : Jan 12, 2023
Report Number : 2530671-2

Page 1 of 1

Sample Number	22154226-1
Sampled Date	Jan 04, 2023 10:45 AM
Sample Description	Wastewater
Location	พื้นที่ขุดลอก
Date Analysis Commenced	Jan 05, 2023
Condition of Sample	Contained in one 800 bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Metals Testing								
Calcium	meq/L	0.003	0.005	4.01	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Magnesium	meq/L	0.003	0.005	1.20	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
SAR	-	-	-	3.88	No Standard	0-10	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Sodium	meq/L	0.003	0.005	6.26	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Water Testing								
Chloride	mg/L	0.05	0.1	Not Detected	No Standard	≤1.0	In-house method : STM 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 200.1	Bangkok
Dissolved Oxygen	mg/L	-	0.1	7.2	No Standard	≥4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

Guideline : Guideline (1) : 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).
Guideline (2) : Environmental Impact Assessment Report of Gulf T54 Co., Ltd.

Sampling By : Pathompong Komsawat รหัสประจำตัว 3-323-9-9468 , Jakkarin Manwicha รหัสประจำตัว 3-204-9-8587

Remark :

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

Approved by

N. Banphit
Narumon Banchojkit
Supervisor
รหัสประจำตัว 3-323-9-9445

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1301-601 ENR

S. (Report)_AL_2021-01 (6.23P4)



Analysis / Test Report

Client : Gulf T54 Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GTS4

TESTING

No.0042

Lot ID: 2310362

Date Received : Feb 06, 2023
Date Reported : Feb 14, 2023

Report Number : 2553647-1

Page 1 of 1

Sample Number	2310362-1
Sampled Date	Feb 06, 2023 10:50 AM
Sample Description	Wastewater
Location	บ้านใหม่ไผ่สุก
Date Analysis Commenced	Feb 06, 2023
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 (LOB)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Water Testing								
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Color (at Original pH)	ADMF	-	5	23	≤300	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMF	-	5	21	≤300	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
pH at 25 degree C *		-	-	7.8	5.5-9.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.1	≤40	≤34	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	916	≤3000	≤1300	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	-	5	<5	≤50	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Guideline (1) : 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).
Guideline (2) : Environmental Impact Assessment Report of Gulf T54 Co., Ltd.

Sampling By : Narurat thammassaro นารุณัฐ ธรรมสาร ๓-323-๙-9477 , Samart Khumpluee นัสมารท์ ๓-204-๙-7830

Remark :

- LOD : Limit of Detection
- <C* : Lower than LOQ (Limit of Quantitation) / LOB (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 Banchoangkit
Supervisor
๓-323-๙-9445

Approved by

D. Chingchon

Dej Chingchon
Senior Manager
๓-323-๙-9442

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0101-6417040

S:\Report\LA_2023\01 (1.5394)



Analysis / Test Report

Client : Gulf T54 Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GTS4

Lot ID: 2310362

Date Received : Feb 06, 2023
Date Reported : Feb 14, 2023

Report Number : 2553647-2

Page 1 of 1

Sample Number	2310362-1
Sampled Date	Feb 06, 2023 10:50 AM
Sample Description	Wastewater
Location	บ้านใหม่ไผ่สุก
Date Analysis Commenced	Feb 07, 2023
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 (LOB)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Metals Testing								
Calcium	meq/L	0.003	0.005	3.78	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Magnesium	meq/L	0.003	0.005	1.16	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
SAR	-	-	-	4.71	No Standard	0-10	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Sodium	meq/L	0.003	0.005	7.40	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Water Testing								
Chloride	mg/L	0.05	0.1	Not Detected	No Standard	≤1.0	In-house method : STM 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Dissolved Oxygen	mg/L	-	0.1	7.7	No Standard	≥4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

Guideline : Guideline (1) : 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).
Guideline (2) : Environmental Impact Assessment Report of Gulf T54 Co., Ltd.

Sampling By : Narurat thammassaro นารุณัฐ ธรรมสาร ๓-323-๙-9477 , Samart Khumpluee นัสมารท์ ๓-204-๙-7830

Remark :

- LOD : Limit of Detection
- <C* : Lower than LOQ (Limit of Quantitation) / LOB (Limit of Reporting)

Approved by

Savitree N.

Savitree Nongniam
Manager

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0101-6417040

S:\Report\LA_2023\02 (1.5394)



Analysis / Test Report

Client : Gulf T&A Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasil, Pluek Daeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GTS4

Lot ID: 2324201

Date Received : Mar 08, 2023

Date Reported : Mar 16, 2023

Report Number : 2586191-1

TESTING

No.0042

Page 1 of 1

Sample Number	2324201-1
Sampled Date	Mar 08, 2023 10:45 AM
Sample Description	Wastewater
Location	ในถังน้ำเสีย
Date Analysis Commenced	Mar 08, 2023
Condition of Sample	Contained in one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Water Testing								
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 B	Rayong
Color (at Original pH)	ADMI	-	5	22	≤300	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	20	≤300	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
pH at 25 degree C *	-	-	-	8.1	5.5-9.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (9)	Rayong
Temperature *	Degree C	-	-	31.2	≤40	≤34	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	892	≤3000	≤1300	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤50	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Guideline (1) : 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).
Guideline (2) : Environmental Impact Assessment Report of Gulf T&A Co., Ltd.

Sampling By : Pathompong Komsawat มัณฑิลาภรณ์ ๓-๓23-๓-๙๔68 , Jakkarn Manwicha มัณฑิลาภรณ์ ๓-204-๓-8587

Remark :

- LOD : Limit of Detection
- < : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analysis marked * : Value 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 Banphonghit

Supervisor

มัณฑิลาภรณ์ ๓-323-๓-๙๔45

Approved by

Dej Changchon

Senior Manager

มัณฑิลาภรณ์ ๓-323-๓-๙๔๔๒

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13011401/THAIL

S. (Person)_AL_2024-01 (10-1584)



Analysis / Test Report

Client : Gulf T&A Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasil, Pluek Daeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GTS4

Lot ID: 2324201

Date Received : Mar 08, 2023

Date Reported : Mar 16, 2023

Report Number : 2586191-2

Page 1 of 1

Sample Number	2324201-1
Sampled Date	Mar 08, 2023 10:45 AM
Sample Description	Wastewater
Location	ในถังน้ำเสีย
Date Analysis Commenced	Mar 09, 2023
Condition of Sample	Contained in one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Metals Testing								
Calcium	mg/L	0.003	0.005	4.15	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Magnesium	mg/L	0.003	0.005	1.20	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
SAR	-	-	-	4.57	No Standard	0-10	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Sodium	mg/L	0.003	0.005	7.47	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Water Testing								
Chloride	mg/L	0.05	0.1	Not Detected	No Standard	≤1.0	In-house method : STM 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Dissolved Oxygen	mg/L	-	0.1	7.0	No Standard	≥4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

Guideline : Guideline (1) : 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).
Guideline (2) : Environmental Impact Assessment Report of Gulf T&A Co., Ltd.

Sampling By : Pathompong Komsawat มัณฑิลาภรณ์ ๓-๓23-๓-๙๔68 , Jakkarn Manwicha มัณฑิลาภรณ์ ๓-204-๓-8587

Remark :

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

Approved by

Savitree N.

Savitree Nongsingam

Manager

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13011401/THAIL

S. (Person)_AL_2024-01 (10-1584)



Analysis / Test Report

Client : Gulf T54 Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong

Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GTS4

TESTING

No.0042

Lot ID: 2335571

Date Received : Apr 03, 2023

Date Reported : Apr 11, 2023

Report Number : 2608153-1

Page 1 of 2

Sample Number	2335571-1
Sample Date	Apr 03, 2023 11:15 AM
Sample Description	Wastewater
Location	พื้นที่น้ำเสีย
Date Analysis Commenced	Apr 03, 2023
Condition of Sample	Contained in one BOD bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)

Analyte	Unit	LOQ	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	2.0	<2.0	≤20	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Color (at Original pH)	ADMI	5	20	≤300	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	5	20	≤300	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Dissolved Oxygen *	mg/L	0.1	7.3	No Standard	≥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	5.5-9.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Temperature *	Degree C	-	33.3	≤40	≤34	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	968	≤3000	≤1300	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	5	14	≤50	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Guideline (1) : 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).
Guideline (2) : Environmental Impact Assessment Report of Gulf T54 Co., Ltd.

Sampling By : Pathompong Komsawat รหัสประจำตัว 7-323-9-9468, Smart Khumplee รหัสประจำตัว 7-204-9-7630

Remark :

Technical Management

N. Banphit

Narumon Banchoangkit

Supervisor

รหัสประจำตัว 7-323-9-9445

Approved by

D. Chongchon

Dej Chongchon

Senior Manager

รหัสประจำตัว 7-323-9-9442

Technical Management

N. Banphit

Narumon Banchoangkit

Supervisor

รหัสประจำตัว 7-323-9-9445

Approved by

D. Chongchon

Dej Chongchon

Senior Manager

รหัสประจำตัว 7-323-9-9442

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31431647 DML

5 Maenam_LAB_2023-04 (11.11.2023)



Analysis / Test Report

Client : Gulf T54 Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong

Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GTS4

TESTING

No.0042

Lot ID: 2335571

Date Received : Apr 03, 2023

Date Reported : Apr 11, 2023

Report Number : 2608153-1

Page 2 of 2

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

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31431647 DML

5 Maenam_LAB_2023-04 (11.11.2023)



Analysis / Test Report

Client : Gulf T54 Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GTS4

Lot ID: 2345835

Date Received : May 03, 2023

Date Reported : May 15, 2023

Report Number : 2631426-3 C6-1

Page 1 of 1

Sample Number	2345835-1
Sampled Date	May 03, 2023 10:50 AM
Sample Description	Wastewater
Location	ใกล้หน่วยบำบัดน้ำ
Date Analysis Commenced	May 04, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, three amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOE)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Metals Testing								
Calcium	mg/L	0.003	0.005	3.57	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Magnesium	mg/L	0.003	0.005	1.13	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
SAR	-	-	0.10	5.34	No Standard	0-10	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Sodium	mg/L	0.003	0.005	8.19	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Water Testing								
Chlorite	mg/L	0.05	0.1	Not Detected	No Standard	≤1.0	In-house method : STM 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Dissolved Oxygen	mg/L	-	0.1	7.2	No Standard	≥4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

Guideline : Guideline (1) : 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).
Guideline (2) : Environmental Impact Assessment Report of Gulf T54 Co., Ltd.

Sampled By : Narurat thammassaro, Panupong Maht

Remark :

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

Approved by
Savitree N.
Savitree Nisangam
Manager

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02615411/046



Analysis / Test Report

Client : Gulf T54 Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GTS4

TESTING

No.0042

Lot ID: 2356656

Date Received : Jun 02, 2023

Date Reported : Jun 10, 2023

Report Number : 2655104-1

Page 1 of 2

Sample Number	2356656-1
Sampled Date	Jun 02, 2023 10:45 AM
Sample Description	Wastewater
Location	ใกล้หน่วยบำบัดน้ำ
Date Analysis Commenced	Jun 02, 2023
Condition of Sample	Contained in one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOE)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Water Testing								
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
Color (at Original pH)	ADMI	-	5	20	≤300	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	20	≤300	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
pH at 25 degree C *	-	-	-	7.9	5.5-9.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	33.5	≤40	≤34	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	888	≤3000	≤1300	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	-	5	30	≤50	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Guideline (1) : 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).
Guideline (2) : Environmental Impact Assessment Report of Gulf T54 Co., Ltd.

Sampling By : Narurat thammassaro ๖-๓๒๓-๙-๙๔๗๗, Panupong Maht ๖-๒04-๙-8600

Remark :

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

Approved by
N. Banphit
Narumon Banchoangkit
Supervisor
๖-๓๒๓๖๗ ๖-๓๒๓-๙-๙๔๔๕

Approved by

D. Phum...
Dei Changchon
Senior Manager
๖-๓๒๓๖๗ ๖-๓๒๓-๙-๙๔๔๕

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RIGHT SOLUTIONS พริ้งเพ้ง ฟ้าใส

02615411/046

02615411/046



Client : Gulf TS4 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasit, Pluak Daeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring EIA
Project Location :GTS4

Analysis / Test Report

TESTING
No.0042
Lot ID: 2356656
Date Received : Jun 02, 2023
Date Reported : Jun 10, 2023
Report Number : 2655104-1

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

Page 2 of 2



Client : Gulf TS4 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasit, Pluak Daeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring EIA
Project Location :GTS4

Analysis / Test Report

TESTING
No.0042
Lot ID: 2356656
Date Received : Jun 02, 2023
Date Reported : Jun 10, 2023
Report Number : 2655104-1

Page 2 of 2



Client : Gulf TS4 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasit, Pluak Daeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring EIA
Project Location :GTS4

Analysis / Test Report

Client : Gulf TS4 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasit, Pluak Daeng, Rayong
Thailand 21140

P/O :
Project Name : Monitoring EIA
Project Location :GTS4

Page 1 of 1

Sample Number 2356656-1
Sampled Date Jun 02, 2023 10:45 AM
Sample Description Wastewater
Location ต.พิกุลใหญ่
Date Analysis Commenced Jun 06, 2023
Condition of Sample Contained in one BOD bottle and four plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Metals Testing								
Calcium	mg/L	0.003	0.005	3.44	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Magnesium	mg/L	0.003	0.005	1.02	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
SAR	-	-	-	4.70	No Standard	0-10	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Sodium	mg/L	0.003	0.005	7.01	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Water Testing								
Chlorite	mg/L	0.05	0.1	0.16	No Standard	≤1.0	In-house method : STM 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Dissolved Oxygen	mg/L	-	0.1	7.6	No Standard	≥4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong

Guideline : Guideline (1) : 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).
Guideline (2) : Environmental Impact Assessment Report of Gulf TS4 Co., Ltd.

Sampling By : นารุนท์ เทมมิสาโร นานุมอน บัณฑิต 3-323-9-9477, Panupong Manit wadipulueat 3-204-9-8600

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

Technical Management

N. Banpmit
Narumon Banchongkit
Supervisor
ติดต่อ 3-323-9-9445

Approved by

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

Approved by
Sawitree Nolsangman
Manager

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1101-601 PMAE

01-623-8888 P. 6/25/61 E. 1/6/1A

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1101-601 PMAE

01-623-8888 P. 6/25/61 E. 1/6/1A

S:\Report\AL_2023\m1 (1.2023M)



Analysis / Test Report

TESTING
No.0042
Lot ID: 2345835
Date Received : May 03, 2023
Date Reported : May 12, 2023
Report Number : 2631426-1

Client : Gulf TS4 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Page 1 of 2

Sample Number	2345835-1			
Sample Date	May 03, 2023 10:50 AM			
Sample Description	Wastewater			
Location	Jai Win-Mae Lu			
Date Analysis Commenced	May 03, 2023			
Condition of Sample	Contained in one BOD bottle, two glass vials, three amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)			

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Water Testing								
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	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	25	38	≤120	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	35	≤300	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	32	≤300	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cyanide as CN *	mg/L	0.001	0.005	<0.005	≤0.2	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1.0	No Standard	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed., 2064	Rayong
Oil & Grease *	mg/L	-	3	3	≤5	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	5.5-9.0	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	0.01	≤1.0	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5530 D	Rayong

Technical Management

N. Bangpit
Nannorn Banchongkit
Supervisor
โทรศัพท์ ๖-323-๙-9445

Approved by

D. Chongchon
Doi Chongchon
Senior Manager
โทรศัพท์ ๖-323-๙-9442

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Analysis / Test Report

TESTING
No.0042
Lot ID: 2345835
Date Received : May 03, 2023
Date Reported : May 12, 2023
Report Number : 2631426-1

Client : Gulf TS4 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Page 2 of 2

Sample Number	2345835-1			
Sample Date	May 03, 2023 10:50 AM			
Sample Description	Wastewater			
Location	Jai Win-Mae Lu			
Date Analysis Commenced	May 03, 2023			
Condition of Sample	Contained in one BOD bottle, two glass vials, three amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)			

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Water Testing								
Residual Free Chlorine *	mg/L	-	0.1	0.2	≤1.0	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	33.1	≤40	≤34	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	960	≤3000	≤1300	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	2.9	≤100	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Norg (C), part 4813 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	26	≤50	No Standard	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Guideline (1) : 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).
Guideline (2) : Environmental Impact Assessment Report of Gulf TS4 Co., Ltd.

Sampling By : Narurat thammassiro โทรศัพท์ ๖-323-๙-9477, Panupong Manit โทรศัพท์ ๖-204-๙-8600

Remark :

- LOD : Limit of Detection
- < : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * refers 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. Bangpit
Nannorn Banchongkit
Supervisor
โทรศัพท์ ๖-323-๙-9445

Approved by

D. Chongchon
Doi Chongchon
Senior Manager
โทรศัพท์ ๖-323-๙-9442

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Analysis / Test Report

Client : Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GT54

TESTING
No.0009
Lot ID: 2345835
Date Received : May 03, 2023
Date Reported : May 12, 2023
Report Number : 2631426-2

Page 1 of 5

Sample Number	2345835-1
Sampled Date	May 03, 2023 10:50 AM
Sample Description	Wastewater
Location	พื้นที่น้ำผาแดง
Date Analysis Commenced	May 05, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, three amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOE)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Metals Testing								
Arsenic	mg/L	0.0003	0.0005	0.004	≤0.25	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.37	≤1.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.01	≤2.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.002	≤0.20	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.0003	0.0005	0.52	≤5.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok

Technical Management

Savitree N.
Savitree Nongsangiam
Manager

Approved by

Kanokorn Anek
Kanokorn Anek
Senior Manager

วันที่รับแจ้ง 2-204-q-4709

วันที่ออกแจ้ง 2-204-q-6111

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1303-64 (THAI)

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Analysis / Test Report

Client : Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GT54

TESTING
No.0009
Lot ID: 2345835
Date Received : May 03, 2023
Date Reported : May 12, 2023
Report Number : 2631426-2

Page 2 of 5

Sample Number	2345835-1
Sampled Date	May 03, 2023 10:50 AM
Sample Description	Wastewater
Location	พื้นที่น้ำผาแดง
Date Analysis Commenced	May 05, 2023
Condition of Sample	Contained in one BOD bottle, two glass vials, three amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOE)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Metals Testing								
Nickel	mg/L	0.0003	0.0005	0.02	≤1.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	<0.0005	≤0.02	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	2.02	≤5.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Pesticides - Organochlorine Group								
2,4-DDE *	ug/L	0.01	0.02	Not Detected	≤0.03	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
2,4-DDE *	ug/L	0.01	0.02	Not Detected	≤0.01	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
2,4-DDT *	ug/L	0.01	0.02	Not Detected	≤0.01	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok

Technical Management

Savitree N.
Savitree Nongsangiam
Manager

Approved by

Kanokorn Anek
Kanokorn Anek
Senior Manager

วันที่รับแจ้ง 2-204-q-4709

วันที่ออกแจ้ง 2-204-q-6111

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1303-64 (THAI)

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Analysis / Test Report

Client : Gulf T&A Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluek Daeng, Rayong

Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GT54

TESTING
No.0009
Lot ID: 2345835

Date Received : May 03, 2023

Date Reported : May 12, 2023

Report Number : 2631426-2

Page 3 of 5

Sample Number	Sampled Date	Sample Description	Location	Date Analysis Commenced	Condition of Sample	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
2345835-1	May 03, 2023 10:50 AM	Wastewater	ในท้องน้ำ	May 05, 2023	Contained in one BOD bottle, two glass vials, three amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)	ug/L	0.01	0.02	Not Detected	≤0.01	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6530 D, part 6410 B	Bangkok
4,4'-DDD *						ug/L	0.01	0.02	Not Detected	≤0.01	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6530 D, part 6410 B	Bangkok
4,4'-DDE *						ug/L	0.01	0.02	Not Detected	≤0.01	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6530 D, part 6410 B	Bangkok
4,4'-DDT *						ug/L	0.01	0.02	Not Detected	≤0.01	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6530 D, part 6410 B	Bangkok
Aldrin *						ug/L	0.01	0.02	Not Detected	≤0.02	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6530 D, part 6410 B	Bangkok
alpha-BHC *						ug/L	0.01	0.02	Not Detected	≤0.02	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6530 D, part 6410 B	Bangkok
beta-BHC *						ug/L	0.01	0.02	Not Detected	≤0.01	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6530 D, part 6410 B	Bangkok
Chlordane *						ug/L	0.02	0.01	Not Detected	≤0.01	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6530 D, part 6410 B	Bangkok

Technical Management

Savitree N.

Manager

Approved by

Kanokorn Anek

Senior Manager

หน้างาน 5-204-9-6111

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Analysis / Test Report

Client : Gulf T&A Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluek Daeng, Rayong

Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GT54

TESTING
No.0009
Lot ID: 2345835

Date Received : May 03, 2023

Date Reported : May 12, 2023

Report Number : 2631426-2

Page 4 of 5

Sample Number	Sampled Date	Sample Description	Location	Date Analysis Commenced	Condition of Sample	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
2345835-1	May 03, 2023 10:50 AM	Wastewater	ในท้องน้ำ	May 05, 2023	Contained in one BOD bottle, two glass vials, three amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)	ug/L	0.01	0.02	Not Detected	≤0.1	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6530 D, part 6410 B	Bangkok
deliaz-BHC *						ug/L	0.01	0.02	Not Detected	≤0.02	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6530 D, part 6410 B	Bangkok
Dieldrin *						ug/L	0.01	0.02	Not Detected	≤0.02	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6530 D, part 6410 B	Bangkok
Endosulfan I *						ug/L	0.01	0.02	Not Detected	≤0.1	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6530 D, part 6410 B	Bangkok
Endosulfan II *						ug/L	0.01	0.02	Not Detected	≤0.1	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6530 D, part 6410 B	Bangkok
Endrin *						ug/L	0.01	0.02	Not Detected	≤0.10	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6530 D, part 6410 B	Bangkok
Hephalchlor *						ug/L	0.01	0.02	Not Detected	≤0.02	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6530 D, part 6410 B	Bangkok
Hephalchlor-Epoxide *						ug/L	0.01	0.02	Not Detected	≤0.02	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6530 D, part 6410 B	Bangkok

Technical Management

Savitree N.

Manager

Approved by

Kanokorn Anek

Senior Manager

หน้างาน 5-204-9-6111

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Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Test, Pluek Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0009
Lot ID: 2345835
Date Received : May 03, 2023
Date Reported : May 12, 2023
Report Number : 2631426-2

Page 5 of 5

Sample Number	2345835-1	Sampled Date	May 03, 2023 10:50 AM	Sample Description	Wastewater	Location	ตำบลวังน้ำเย็น	Date Analysis Commenced	May 05, 2023	Condition of Sample	Contained in one BOD bottle, two glass vials, three amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
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Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Pesticides - Organochlorine Group								
Lindane (gamma-BHC) *	ug/L	0.01	0.02	Not Detected	≤0.10	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Methoxychlor *	ug/L	0.01	0.02	Not Detected	≤0.1	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok

Guideline (1) : 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).
Guideline (2) : Environmental Impact Assessment Report of Gulf T&S Co., Ltd.

Sampling By : Narunat thammassaro นารุนาต ธรรมสาร 323-a-9477, Panupong Manit นพปอง มณี 204-a-8600

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

Savitree N.

Savitree Nolsanglam

Manager

โทรศัพท์ 204-a-7709

Approved by

Kanokkom Anok

Senior Manager

โทรศัพท์ 204-a-6111

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12831-611 (FNU)

5 (Report)_AL_2024 (v17.3594)



Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Test, Pluek Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2345835
Date Received : May 03, 2023
Date Reported : May 12, 2023
Report Number : 2631426-3

Page 1 of 2

Sample Number	2345835-1	Sampled Date	May 03, 2023 10:50 AM	Sample Description	Wastewater	Location	ตำบลวังน้ำเย็น	Date Analysis Commenced	May 04, 2023	Condition of Sample	Contained in one BOD bottle, two glass vials, three amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
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Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Metals Testing								
Calcium	mg/L	0.003	0.005	3.57	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Magnesium	mg/L	0.003	0.005	1.13	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
SAR	-	-	-	5.34	No Standard	0-10	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Sodium	mg/L	0.003	0.005	8.19	No Standard	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok

Pesticides - Organochlorine Group								
alpha-Chlordane	ug/L	0.01	0.02	Not Detected	≤0.1	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
gamma-Chlordane	ug/L	0.01	0.02	Not Detected	≤0.1	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Heachlorobenzene	ug/L	0.01	0.02	Not Detected	<0.1	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok
Mirex	ug/L	0.01	0.02	Not Detected	No Standard	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 6630 D, part 6410 B	Bangkok

Water Testing

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Approved by

Savitree N.

Savitree Nolsanglam

Manager

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12831-611 (FNU)

5 (Report)_AL_2024 (v17.3594)



Analysis / Test Report

Client : Gulf TS4 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tassit, Muak Daeng, Rayong
Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4
Lot ID: 2345835
Date Received : May 03, 2023
Date Reported : May 12, 2023
Report Number: 2631426-3

Page 2 of 2

Sample Number	2345835-1							
Sample Date	May 03, 2023 10:50 AM							
Sample Description	Wastewater							
Location	โรงงานน้ำตาล							
Date Analysis Commenced	May 04, 2023							
Condition of Sample	Contained in one BOD bottle, two glass vials, three amber glass bottles and nine plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)							
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
Water Testing								
Chloride	mg/L	0.05	0.1	Not Detected	No Standard	≤1.0	In-house method : STM 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Dissolved Oxygen	mg/L	-	0.1	7.2	No Standard	≥4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
Odour	-	-	-	Odourless	No Standard	No Standard	TIS, 257-2519	Rayong

Guideline : Guideline (1) : 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).
Guideline (2) : Environmental Impact Assessment Report of Gulf TS4 Co., Ltd.

Sampling By : นันทนัท วัฒนธนากร 7-323-9-9477, Panupong Manit vatthananak 7-204-9-8600

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

Approved by

Sawitree Nibangiam
Manager

The above results were obtained from the analysis of the sample as submitted. ALS is not responsible for the accuracy of the results if the sample is not representative of the population or if the sample is not properly preserved or if the sample is not properly analyzed. ALS is not responsible for the accuracy of the results if the sample is not properly analyzed or if the sample is not properly preserved or if the sample is not properly analyzed.

ภาคผนวก ค-6

คุณภาพน้ำผิวดิน



Analysis / Test Report

TESTING
No.0042

Lot ID: 2335525

Date Received : Apr 03, 2023
Date Reported : Jun 26, 2023
Report Number : 2608128-1 C6

Client : Gulf T&T Co., Ltd.
87 M,Thai Tower All Season Place, 11th Floor, Wireless Road, Lumpini, Pathumwan,
Bangkok Thailand 10330
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Page 1 of 12

Sample Number	2335525-1			
Sampled Date	Apr 03, 2023	1:28 PM		
Sample Description	Surface water			
Location	เขื่อนกั้นน้ำในลำน้ำท่าจีน 200 เมตร			
Date Analysis Commenced	Apr 03, 2023			
Condition of Sample	Contained in one 800 bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)			

Analyte	Unit	LOD	LOQ (LOI)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
(A) Calcium	mg/L	0.003	0.005	1.70	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
(A) Magnesium	mg/L	0.003	0.005	0.43	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
(A) SAR *	-	-	-	2.30	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
(A) Sodium	mg/L	0.003	0.005	2.37	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Water Testing							
BOD *	mg/L	-	2	3.4	≤4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Chlorite *	mg/L	0.05	0.1	Not Detected	No Standard	In-house method : STM 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Dissolved Oxygen *	mg/L	-	0.1	3.9	≥2	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	-	-	-	7.5	5.0-9.0	In-house method : STM 02-005 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	31.1	Not Change from natural condition	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong

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Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

Analysis / Test Report

TESTING
No.0042

Lot ID: 2335525

Date Received : Apr 03, 2023
Date Reported : Jun 26, 2023
Report Number : 2608128-1 C6

Client : Gulf T&T Co., Ltd.
87 M,Thai Tower All Season Place, 11th Floor, Wireless Road, Lumpini, Pathumwan,
Bangkok Thailand 10330
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Page 2 of 12

Sample Number	2335525-1			
Sampled Date	Apr 03, 2023	1:28 PM		
Sample Description	Surface water			
Location	เขื่อนกั้นน้ำในลำน้ำท่าจีน 200 เมตร			
Date Analysis Commenced	Apr 03, 2023			
Condition of Sample	Contained in one 800 bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)			

Analyte	Unit	LOD	LOQ (LOI)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	284	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	-	5	21	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the National Environmental Board, No. 8, B.E.2537 issued under the Enhancement and Conservation of National Environmental Quality Act. B.E.2535, published in the Royal Government Gazette, Vol. 111, Part 16, Dated February 24, B.E. 2537 (Class 4)

n: Change from Natural condition not more than 3 degree C

Sampled By : Pathompong Komswat, Samart Khumplilee

Remark :
- LOD : Limit of Detection
- <C : Lower than LOQ (Limit of Quantitation) / LOQ (Limit of Reporting)
- Analyst(s) marked * refers not included in scope of Accreditation ISO/IEC 17025.
- (A) Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok branch, DSS Accreditation No. 0069.

Approved by

N. Banphit

Narumon Banchoangkit
Supervisor

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Analysis / Test Report

Client : Gulf TSA Co., Ltd.
87 M Thai Tower All Season Place, 11th Floor, Wireless Road, Lumpini, Pathumwan,
Bangkok Thailand 10330
P/O : GTS4-4210300514
Project Name : Monitoring EIA
Project Location: GTS4

TESTING
No.0042
Lot ID: 2335525
Date Received : Apr 03, 2023
Date Reported : Jun 26, 2023
Report Number : 2608128-1 C6

Page 2 of 12

Sample Number	2335525-2
Sample Date	Apr 03, 2023 1:50 PM
Sample Description	Surface water
Location	หน้าประตูน้ำ อุโมงค์น้ำฝน 200 เมตร
Date Analysis Commenced	Apr 03, 2023
Condition of Sample	Contained in one BOD bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
(A) Calcium	mg/L	0.003	0.005	0.90	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
(A) Magnesium	mg/L	0.003	0.005	0.31	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
(A) Sulfate *	-	-	-	1.38	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
(A) Sodium	mg/L	0.003	0.005	1.07	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Water Testing							
BOD *	mg/L	-	2	<2	≤4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Chloride *	mg/L	0.05	0.1	Not Detected	No Standard	In-house method : STM 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Dissolved Oxygen *	mg/L	-	0.1	6.4	≥2	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	-	-	-	7.5	5.0-9.0	In-house method : STM 02-005 based on 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	Not Change from natural condition	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong

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Approved by

N. Banphit

Narumon Banchongkit
Supervisor

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Analysis / Test Report

Client : Gulf TSA Co., Ltd.
87 M Thai Tower All Season Place, 11th Floor, Wireless Road, Lumpini, Pathumwan,
Bangkok Thailand 10330
P/O : GTS4-4210300514
Project Name : Monitoring EIA
Project Location: GTS4

TESTING
No.0042
Lot ID: 2335525
Date Received : Apr 03, 2023
Date Reported : Jun 26, 2023
Report Number : 2608128-1 C6

Page 4 of 12

Sample Number	2335525-2
Sample Date	Apr 03, 2023 1:50 PM
Sample Description	Surface water
Location	หน้าประตูน้ำ อุโมงค์น้ำฝน 200 เมตร
Date Analysis Commenced	Apr 03, 2023
Condition of Sample	Contained in one BOD bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	166	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	-	5	12	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the National Environmental Board, No. 8, B.E.2537 issued under the Enhancement and Conservation of National Environmental Quality Act, B.E.2535, published in the Royal Government Gazette, Vol. 111, Part 16, Dated February 24, B.E. 2537 (Class 4)
n: Change from Natural condition not more than 3 degree C
Sampled By : Pathompong Komsawat, Smart Khumplee

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * are not included in scope of Accreditation ISO/IEC 17025.
- (A) Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, OSS Accreditation No. 0009.

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N. Banphit

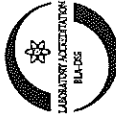
Narumon Banchongkit
Supervisor

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1310-61/EMAIL



Analysis / Test Report

Client : Gulf T&S Co., Ltd.
87 M.Thai Tower All Season Place, 11th Floor, Wireless Road, Lumpini, Pathumwan,
Bangkok Thailand 10330
P/O : GT54-4210500514
Project Name : Monitoring EIA
Project Location : GT54

TESTING
No.0042
Lot ID: 2335525

Date Received : Apr 03, 2023
Date Reported : Jun 26, 2023
Report Number : 2608128-1 C5

Page 5 of 12

Sample Number	2335525-3			
Sample Date	Apr 03, 2023	2:10 PM		
Sample Description	Surface water			
Location	เขื่อนท่าช้างน้ำท่าอ่าวบ้านดอน 200 mns			
Date Analysis Commenced	Apr 03, 2023			
Condition of Sample	Contained in one BOD bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)			

Analyte	Unit	LOD	LOQ (LOE)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
^(A) Calcium	mg/L	0.003	0.005	2.10	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
^(A) Magnesium	mg/L	0.003	0.005	0.63	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
^(A) SAR *	-	-	-	2.85	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
^(A) Sodium	mg/L	0.003	0.005	3.38	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Water Testing BOD *	mg/L	-	2	<2	≤4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Chlorite *	mg/L	0.05	0.1	Not Detected	No Standard	In-house method : STM 04-051 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Dissolved Oxygen *	mg/L	-	0.1	6.3	≥2	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	-	-	-	7.4	5.0-9.0	In-house method : STM 02-005 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (E)	Rayong
Temperature *	Degree C	-	-	32.8	Not Change from natural condition	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong

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Approved by

N. Banphit

Narumon Banchongkit
Supervisor

Analysis / Test Report

Client : Gulf T&S Co., Ltd.
87 M.Thai Tower All Season Place, 11th Floor, Wireless Road, Lumpini, Pathumwan,
Bangkok Thailand 10330
P/O : GT54-4210500514
Project Name : Monitoring EIA
Project Location : GT54

TESTING
No.0042
Lot ID: 2335525

Date Received : Apr 03, 2023
Date Reported : Jun 26, 2023
Report Number : 2608128-1 C6

Page 6 of 12

Sample Number	2335525-3			
Sample Date	Apr 03, 2023	2:10 PM		
Sample Description	Surface water			
Location	เขื่อนท่าช้างน้ำท่าอ่าวบ้านดอน 200 mns			
Date Analysis Commenced	Apr 03, 2023			
Condition of Sample	Contained in one BOD bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)			

Analyte	Unit	LOD	LOQ (LOE)	Result	Guideline / Specification	Method	Testing Location
Water Testing Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	432	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	-	5	31	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the National Environmental Board, No. 8, B.E.2537 issued under the Enhancement and Conservation of National Environmental Quality Act, B.E.2535, published in the Royal Government Gazette, Vol. 111, Part 16, Dated February 24, B.E. 2537 (Class 4)

n: Change from Natural condition not more than 3 degree C

Sampled By : Pathompong Komsawat, Samart Khumphet

Remark :

- LOD : Limit of Detection
- LOQ : Lower than LOQ (Limit of Quantitation) / LOQ (Limit of Reporting)
- Analyte(s) marked * relate not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok branch, ISO Accreditation No. 0609.

Approved by

N. Banphit

Narumon Banchongkit
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Analysis / Test Report

TESTING
No.0042

Client : Gulf T&S Co., Ltd.
87 M.Thai Tower All Season Place, 11th Floor, Wireless Road, Lumpini, Pathumwan,
Bangkok Thailand 10330
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location: GTS4

Client : Gulf T&S Co., Ltd.
87 M.Thai Tower All Season Place, 11th Floor, Wireless Road, Lumpini, Pathumwan,
Bangkok Thailand 10330
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location: GTS4

Analysis / Test Report

TESTING
No.0042

Lot ID: 2335525
Date Received : Apr 03, 2023
Date Reported : Jun 26, 2023
Report Number : 2608128-1 C6

Page 2 of 12

Sample Number	2335525-4
Sample Date	Apr 03, 2023 2:45 PM
Sample Description	Surface water
Location	หน้าประตูรั้ววัดห้วยหินลาด 200 เมตร
Date Analysis Commenced	Apr 03, 2023
Condition of Sample	Contained in 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
Metals Testing							
(A) Calcium	mg/L	0.003	0.005	1.48	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
(A) Magnesium	mg/L	0.003	0.005	0.45	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
(A) SAR *	-	-	-	2.58	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
(A) Sodium	mg/L	0.003	0.005	2.54	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Water Testing							
BOD *	mg/L	-	2	2.1	≤4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Chlorite *	mg/L	0.05	0.1	Not Detected	No Standard	In-house method : STM 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Dissolved Oxygen *	mg/L	-	0.1	7.5	≥2	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	-	-	-	7.6	5.0-9.0	In-house method : STM 02-005 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (6)	Rayong
Temperature *	Degree C	-	-	33.8	Not Change from natural condition	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong

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Page 8 of 12

Sample Number	2335525-4
Sample Date	Apr 03, 2023 2:45 PM
Sample Description	Surface water
Location	หน้าประตูรั้ววัดห้วยหินลาด 200 เมตร
Date Analysis Commenced	Apr 03, 2023
Condition of Sample	Contained in 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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	330	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	-	5	54	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the National Environmental Board, No. 8, B.E.2537 issued under the Enhancement and Conservation of National Environmental Quality Act, B.E.2535, published in the Royal Government Gazette, Vol. 111, Part 16, Dated February 24, B.E. 2537 (Class 4)
n: Change from Natural condition not more than 3 degree C
Sampled By : Pathompong Kornasawat, Smart Khumpluee

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOQ (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, DSS Accreditation No. 0009.

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N. Ban-ngit

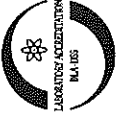
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Analysis / Test Report

Client : Gulf T54 Co., Ltd.
87 M.Thai Tower All Season Place, 11th Floor, Wireless Road, Lumpini, Pathumwan,
Bangkok Thailand 10330
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0042
Lot ID: 2335525

Date Received : Apr 03, 2023
Date Reported : Jun 26, 2023
Report Number : 2608128-1 C6

Page 9 of 12

Sample Number	2335525-5
Sample Date	Apr 03, 2023 3:05 PM
Sample Description	Surface water
Location	อ่าวฟันทวนอ่าวบ้านหินทราย 2 นล.
Date Analysis Commenced	Apr 03, 2023
Condition of Sample	Contained in 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
Metals Testing							
^(A) Calcium	mg/L	0.003	0.005	1.01	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
^(A) Magnesium	mg/L	0.003	0.005	0.32	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
^(A) SAR *	-	-	-	1.70	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
^(A) Sodium	mg/L	0.003	0.005	1.38	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Water Testing							
BOD *	mg/L	-	2	3.3	≤4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
Chlorite *	mg/L	0.05	0.1	Not Detected	No Standard	In-house method : STM 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Dissolved Oxygen *	mg/L	-	0.1	8.6	≥2	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	-	-	-	8.8	5.0-9.0	In-house method : STM 02-005 based on 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	Not Change from natural condition	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong

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N. Banpitt

Narumon Banchoangkit
Supervisor

Analysis / Test Report

Client : Gulf T54 Co., Ltd.
87 M.Thai Tower All Season Place, 11th Floor, Wireless Road, Lumpini, Pathumwan,
Bangkok Thailand 10330
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0042
Lot ID: 2335525

Date Received : Apr 03, 2023
Date Reported : Jun 26, 2023
Report Number : 2608128-1 C6

Page 10 of 12

Sample Number	2335525-5
Sample Date	Apr 03, 2023 3:05 PM
Sample Description	Surface water
Location	อ่าวฟันทวนอ่าวบ้านหินทราย 2 นล.
Date Analysis Commenced	Apr 03, 2023
Condition of Sample	Contained in 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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	170	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	-	5	40	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the National Environmental Board, No. 8, B.E.2537 issued under the Enhancement and Conservation of National Environmental Quality Act, B.E.2535; published in the Royal Government Gazette, Vol. 111, Part 16, Dated February 24, B.E. 2537 (Class 4)

n: Change from Natural condition not more than 3 degree C

Sampled By : Pathompong Komsawat, Samart Khumphet

Remark :

- LOD : Limit of Detection
- <L : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- (A) Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, OSS Accreditation No. 0009.

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Narumon Banchoangkit
Supervisor



Analysis / Test Report

Client : Gulf T&S Co., Ltd.
87 M, Thai Tower All Season Place, 11th Floor, Wireless Road, Lumpini, Pathumwan,
Bangkok Thailand 10330
P/O : GTS4-42.0300514
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0042
Lot ID: 2335525
Date Received : Apr 03, 2023
Date Reported : Jun 26, 2023
Report Number : 2608128-1 C6

Page 11 of 12

Sample Number	2335525-6
Sample Date	Apr 03, 2023 3:25 PM
Sample Description	Surface water
Location	ด้านหน้าอาคาร 1 ใน อาคารท่าอากาศยานสุวรรณภูมิ 4 นู
Date Analysis Commenced	Apr 03, 2023
Condition of Sample	Contained in 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
Metals Testing							
(A) Calcium	mg/L	0.003	0.005	1.01	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
(A) Magnesium	mg/L	0.003	0.005	0.32	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
(A) SAR *	-	-	-	1.51	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
(A) Sodium	mg/L	0.003	0.005	1.23	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Water Testing							
BOD *	mg/L	-	2	3.0	≤4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2210 B	Rayong
Chlorite *	mg/L	0.05	0.1	Not Detected	No Standard	In-house method : STM 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Dissolved Oxygen *	mg/L	-	0.1	6.7	≥2	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	5.0-9.0	In-house method : STM 02-005 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (6)	Rayong
Temperature *	Degree C	-	-	32.7	Not Change from natural condition	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong

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Analysis / Test Report

Client : Gulf T&S Co., Ltd.
87 M, Thai Tower All Season Place, 11th Floor, Wireless Road, Lumpini, Pathumwan,
Bangkok Thailand 10330
P/O : GTS4-42.0300514
Project Name : Monitoring EIA
Project Location : GTS4

TESTING
No.0042
Lot ID: 2335525
Date Received : Apr 03, 2023
Date Reported : Jun 26, 2023
Report Number : 2608128-1 C6

Page 12 of 12

Sample Number	2335525-6
Sample Date	Apr 03, 2023 3:25 PM
Sample Description	Surface water
Location	ด้านหน้าอาคาร 1 ใน อาคารท่าอากาศยานสุวรรณภูมิ 4 นู
Date Analysis Commenced	Apr 03, 2023
Condition of Sample	Contained in 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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	158	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	-	5	47	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the National Environmental Board, No. 8, B.E.2537 issued under the Enhancement and Conservation of National Environmental Quality Act. B.E.2535, published in the Royal Government Gazette, Vol. 111, Part 16, Dated February 24, B.E. 2537 (Class 4)
n: Change from Natural condition not more than 3 degree C
Sampled By : Pathompong Komsewat, Smart Khumplinee

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analysis marked * is not included in scope of Accreditation ISO/IEC 17025.
- (A) Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, OSS Accreditation No. 0009.

Approved by

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ภาคผนวก ค-7

ระดับเสียงภายในสถานประกอบการ



Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
Lot ID: 2328419
Date Received : Mar 17, 2023
Date Reported : Mar 23, 2023
Report Number: 2599302-1

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Page 1 of 1

Sample Number	2328419-1
Parameter	Noise (Leq 8 hrs.)
Location	อุโมงค์ Cooling Tower
Measurement Date	Mar 15, 2023
Measurement by	Jaradrawee Srinuksa

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
09:56 AM - 10:56 AM	78.8	79.3	78.7
10:56 AM - 11:56 AM	78.7	79.1	78.6
11:56 AM - 12:56 PM	78.7	79.0	78.6
12:56 PM - 01:56 PM	78.6	79.0	78.5
01:56 PM - 02:56 PM	78.6	79.0	78.5
02:56 PM - 03:56 PM	78.7	79.5	78.5
03:56 PM - 04:56 PM	80.4	81.5	79.7
04:56 PM - 05:56 PM	80.5	80.8	80.4

Leq Average 8 hrs. (dB(A))
Lmax (dB(A))
Standard (dB(A))
Reference Method : ISO1996-1 and 1996-2
Standard : Environmental Impact Assessment Report of Gulf T&S Co., Ltd.
ข้อมูลสิ่งแวดล้อมที่วัดได้ ณ บริเวณที่ประเมินผลกระทบสิ่งแวดล้อม
ตามมาตรฐานที่ระบุไว้ในรายงานการประเมินผลกระทบสิ่งแวดล้อม

Technical Management
Tharitat Kulsurwong
Scientist (4)

Approved by
Supt S
Supt Salameh
Section Head

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



Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
Lot ID: 2328419
Date Received : Mar 17, 2023
Date Reported : Mar 23, 2023
Report Number: 2599303-1

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Page 1 of 1

Sample Number	2328419-2
Parameter	Noise (Leq 8 hrs.)
Location	อุโมงค์ Boiler Feed Pump
Measurement Date	Mar 15, 2023
Measurement by	Jaradrawee Srinuksa

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:01 AM - 11:01 AM	79.1	83.6	78.7
11:01 AM - 12:01 PM	79.0	79.9	78.8
12:01 PM - 01:01 PM	78.9	79.6	78.6
01:01 PM - 02:01 PM	78.9	79.5	78.6
02:01 PM - 03:01 PM	79.4	83.4	78.9
03:01 PM - 04:01 PM	79.3	96.1	78.7
04:01 PM - 05:01 PM	82.4	84.5	81.6
05:01 PM - 06:01 PM	82.2	83.7	81.9

Leq Average 8 hrs. (dB(A))
Lmax (dB(A))
Standard (dB(A))
Reference Method : ISO1996-1 and 1996-2
Standard : Environmental Impact Assessment Report of Gulf T&S Co., Ltd.
ข้อมูลสิ่งแวดล้อมที่วัดได้ ณ บริเวณที่ประเมินผลกระทบสิ่งแวดล้อม
ตามมาตรฐานที่ระบุไว้ในรายงานการประเมินผลกระทบสิ่งแวดล้อม

Technical Management
Tharitat Kulsurwong
Scientist (4)

Approved by
Supt S
Supt Salameh
Section Head

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



Analysis / Test Report

Client : Gulf TS4 Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140

P/O :

Date Received : Mar 17, 2023

Date Reported : Mar 23, 2023

Report Number: 2599304-1

Project Name : Monitoring EIA

Project Location : GTS4

Lot ID: 2328419

Date Received : Mar 17, 2023

Date Reported : Mar 23, 2023

Report Number: 2599304-1

Project Name : Monitoring EIA

Project Location : GTS4

Page 1 of 1

Sample Number	2328419-3
Parameter	Noise (Leq 8 hrs.)
Location	พื้นที่ Gas Turbine Accessories System (ใกล้ระบบทาง GTG 11 unit GTG12)
Measurement Date	Mar 15, 2023
Measurement by	Jaradawee Sruksa

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:17 AM - 11:17 AM	66.1	75.7	65.8
11:17 AM - 12:17 PM	65.7	72.5	64.8
12:17 PM - 01:17 PM	64.9	78.3	64.7
01:17 PM - 02:17 PM	64.8	66.3	64.6
02:17 PM - 03:17 PM	64.8	73.8	64.6
03:17 PM - 04:17 PM	73.3	102.7	64.6
04:17 PM - 05:17 PM	69.4	78.1	64.3
05:17 PM - 06:17 PM	64.2	66.8	64.0

Leq Average 8 hrs. (dB(A))	67.9
Lmax (dB(A))	102.7
Standard (dB(A))	85

Reference Method : ISO1996-1 and 1996-2

Standard : Environmental Impact Assessment Report of Gulf TS4 Co., Ltd.

ประเภทการตรวจวัด : การวัดผลกระทบสิ่งแวดล้อมจากกิจกรรมการดำเนินงาน

ผลการตรวจวัด : ผลการตรวจวัดค่าเสียงรบกวนอยู่ในเกณฑ์มาตรฐานที่กำหนด

Technical Management

Tharitat.

Thantia Kulsirirong

Scientist (4)

Approved by

Supt S.

Supt. Salameh

Section Head

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RIGHT SOLUTIONS

THAILAND P.0473 (11/16/15)

1343-64/ B4UL

S. Waporn1_Air Noise pr (18-6/AM)



Analysis / Test Report

Client : Gulf TS4 Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140

P/O :

Date Received : Mar 17, 2023

Date Reported : Mar 23, 2023

Report Number: 2599305-1

Project Name : Monitoring EIA

Project Location : GTS4

Lot ID: 2328419

Date Received : Mar 17, 2023

Date Reported : Mar 23, 2023

Report Number: 2599305-1

Project Name : Monitoring EIA

Project Location : GTS4

Page 1 of 1

Sample Number	2328419-4
Parameter	Noise (Leq 8 hrs.)
Location	พื้นที่ Gas Turbine Accessories System (ใกล้ระบบทาง GTG 11 unit GTG12)
Measurement Date	Mar 15, 2023
Measurement by	Jaradawee Sruksa

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
10:13 AM - 11:13 AM	80.1	82.4	79.4
11:13 AM - 12:13 PM	79.9	83.1	79.1
12:13 PM - 01:13 PM	80.3	82.7	79.1
01:13 PM - 02:13 PM	79.9	81.7	79.2
02:13 PM - 03:13 PM	80.0	82.5	79.2
03:13 PM - 04:13 PM	77.9	81.4	73.8
04:13 PM - 05:13 PM	75.0	77.8	74.3
05:13 PM - 06:13 PM	74.7	75.5	74.4

Leq Average 8 hrs. (dB(A))	78.9
Lmax (dB(A))	83.1
Standard (dB(A))	85

Reference Method : ISO1996-1 and 1996-2

Standard : Environmental Impact Assessment Report of Gulf TS4 Co., Ltd.

ประเภทการตรวจวัด : การวัดผลกระทบสิ่งแวดล้อมจากกิจกรรมการดำเนินงาน

ผลการตรวจวัด : ผลการตรวจวัดค่าเสียงรบกวนอยู่ในเกณฑ์มาตรฐานที่กำหนด

Technical Management

Tharitat.

Thantia Kulsirirong

Scientist (4)

Approved by

Supt S.

Supt. Salameh

Section Head

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RIGHT SOLUTIONS

THAILAND P.0473 (11/16/15)

1343-64/ B4UL

S. Waporn1_Air Noise pr (18-6/AM)



Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
Lot ID: 2328419
Date Received : Mar 17, 2023
Date Reported : Mar 23, 2023
Report Number: 2599306-1

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Page 1 of 1

Sample Number	2328419-5			
Parameter	Noise (Leq 8 hrs.)			
Location	Upstream Steam Turbine Generator			
Measurement Date	Mar 15, 2023			
Measurement by	Jaradrawee Srukka			
Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))	
10:02 AM - 11:02 AM	82.6	85.2	81.9	
11:02 AM - 12:02 PM	82.5	84.3	82.2	
12:02 PM - 01:02 PM	82.7	85.3	82.0	
01:02 PM - 02:02 PM	82.6	84.4	82.3	
02:02 PM - 03:02 PM	82.5	85.1	81.8	
03:02 PM - 04:02 PM	82.6	84.4	82.3	
04:02 PM - 05:02 PM	82.7	84.5	82.4	
05:02 PM - 06:02 PM	82.8	85.4	82.1	

Technical Management **Tharitat.** **Approved by** **Supt S.**
Thantia Kulsurwong Scientist (4) Supt. Salmeth Section Head

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Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
Lot ID: 2328419
Date Received : Mar 17, 2023
Date Reported : Mar 23, 2023
Report Number: 2599307-1

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Page 1 of 1

Sample Number	2328419-6			
Parameter	Noise (Leq 8 hrs.)			
Location	Inflow Steam Turbine Lube Oil Skid			
Measurement Date	Mar 15, 2023			
Measurement by	Jaradrawee Srukka			
Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))	
10:06 AM - 11:06 AM	76.6	77.7	76.3	
11:06 AM - 12:06 PM	76.6	77.5	76.2	
12:06 PM - 01:06 PM	76.4	77.4	76.1	
01:06 PM - 02:06 PM	75.8	77.0	75.1	
02:06 PM - 03:06 PM	76.3	82.9	75.2	
03:06 PM - 04:06 PM	75.7	79.7	74.8	
04:06 PM - 05:06 PM	75.6	78.9	74.7	
05:06 PM - 06:06 PM	74.7	75.3	74.5	

Technical Management **Tharitat.** **Approved by** **Supt S.**
Thantia Kulsurwong Scientist (4) Supt. Salmeth Section Head

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Analysis / Test Report

Client : Gulf TS4 Co., Ltd.

Lot ID: 2345765

P/O : 225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
Date Received : May 19, 2023
Date Reported : May 25, 2023
Report Number: 2661651-1

Project Name : Monitoring EIA

Project Location : GTS4

Page 1 of 1

Sample Number	2345765-1			
Parameter	Noise (Leq 8 hrs.)			
Location	Utility Cooling Tower			
Measurement Date	May 18, 2023			
Measurement by	Thitpong Buddang			
Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))	
08:39 AM - 09:39 AM	78.6	79.1	78.5	
09:39 AM - 10:39 AM	78.7	79.0	78.6	
10:39 AM - 11:39 AM	78.7	79.0	78.6	
11:39 AM - 12:39 PM	78.7	79.0	78.7	
12:39 PM - 01:39 PM	78.8	79.2	78.7	
01:39 PM - 02:39 PM	78.9	79.2	78.8	
02:39 PM - 03:39 PM	78.9	79.2	78.8	
03:39 PM - 04:39 PM	78.9	79.3	78.9	

Technical Management

Thanitak.

Approved by

Supt S.

Thantia Kulsurwong
Scientist (4)

Supt Salimleh
Section Head

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Analysis / Test Report

Client : Gulf TS4 Co., Ltd.

Lot ID: 2345765

P/O : 225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
Date Received : May 19, 2023
Date Reported : May 25, 2023
Report Number: 2661652-1

Project Name : Monitoring EIA

Project Location : GTS4

Page 1 of 1

Sample Number	2345765-2			
Parameter	Noise (Leq 8 hrs.)			
Location	บริเวณ Boiler Feed Pump			
Measurement Date	May 18, 2023			
Measurement by	Thitipong Buddang			
Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))	
08:36 AM - 09:36 AM	80.2	99.8	79.4	
09:36 AM - 10:36 AM	79.1	80.5	78.8	
10:36 AM - 11:36 AM	79.0	80.5	78.8	
11:36 AM - 12:36 PM	78.9	80.7	78.6	
12:36 PM - 01:36 PM	78.9	79.9	78.6	
01:36 PM - 02:36 PM	79.1	85.1	78.7	
02:36 PM - 03:36 PM	79.1	83.1	78.7	
03:36 PM - 04:36 PM	78.9	83.6	78.6	

Technical Management

Thanitak.

Approved by

Supt S.

Thantia Kulsurwong
Scientist (4)

Supt Salimleh
Section Head

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Analysis / Test Report

Client : Gulf TS4 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4
Lot ID: 2345765
Date Received : May 19, 2023
Date Reported : May 25, 2023
Report Number: 2661653-1

Page 1 of 1

Sample Number	2345765-3
Parameter	Noise (Leq 8 hrs.)
Location	อุโมงค์ Gas Turbine Accessories System (เครื่องจักร GTG 11 unit GTG12)
Measurement Date	May 18, 2023
Measurement by	Thirapong Buaduang

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:23 AM - 09:23 AM	64.5	81.6	64.0
09:23 AM - 10:23 AM	64.8	82.2	64.3
10:23 AM - 11:23 AM	64.7	75.0	64.3
11:23 AM - 12:23 PM	64.6	75.1	64.2
12:23 PM - 01:23 PM	64.6	68.6	64.2
01:23 PM - 02:23 PM	64.6	72.3	64.2
02:23 PM - 03:23 PM	64.7	79.5	64.3
03:23 PM - 04:23 PM	64.7	73.6	64.3

Leq Average 8 hrs. (dB(A))	64.7
Lmax (dB(A))	82.2
Standard (dB(A))	85

Reference Method : ISO1996-1 and 1996-2
Standard : Environmental Impact Assessment Report of Gulf TS4 Co., Ltd.
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ติดตั้งและนำเครื่องจักรมาใช้งานตามแผนการดำเนินงาน

Technical Management

Tharitat.

Thanita Kulsurwong
Scientist (4)

Approved by

Supt S

Supt Salameh
Section Head

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Analysis / Test Report

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225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4
Lot ID: 2345765
Date Received : May 19, 2023
Date Reported : May 25, 2023
Report Number: 2661654-1

Page 1 of 1

Sample Number	2345765-4
Parameter	Noise (Leq 8 hrs.)
Location	อุโมงค์ Gas Turbine Accessories System (เครื่องจักร GTG 11 unit GTG12)
Measurement Date	May 18, 2023
Measurement by	Thirapong Buaduang

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:28 AM - 09:28 AM	78.0	84.4	77.5
09:28 AM - 10:28 AM	77.9	80.3	77.4
10:28 AM - 11:28 AM	77.6	80.6	77.2
11:28 AM - 12:28 PM	77.3	79.2	76.9
12:28 PM - 01:28 PM	77.3	79.0	76.8
01:28 PM - 02:28 PM	77.4	79.0	77.0
02:28 PM - 03:28 PM	77.6	79.3	77.2
03:28 PM - 04:28 PM	77.7	81.3	77.2

Leq Average 8 hrs. (dB(A))	77.6
Lmax (dB(A))	84.4
Standard (dB(A))	85

Reference Method : ISO1996-1 and 1996-2
Standard : Environmental Impact Assessment Report of Gulf TS4 Co., Ltd.
ประเมินผลกระทบสิ่งแวดล้อม จากโครงการก่อสร้างและดำเนินการ
ติดตั้งและนำเครื่องจักรมาใช้งานตามแผนการดำเนินงาน

Technical Management

Tharitat.

Thanita Kulsurwong
Scientist (4)

Approved by

Supt S

Supt Salameh
Section Head

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Analysis / Test Report

Client : Gulf TS4 Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluk Daeng, Rayong Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GT54

Lot ID: 2345765

Date Received : May 19, 2023

Date Reported : May 25, 2023

Report Number: 2661655-1

Page 1 of 1

Sample Number	2345765-5
Parameter	Noise (Leq 8 hrs.)
Location	บริเวณ Steam Turbine Generator
Measurement Date	May 18, 2023
Measurement by	Thippong Buadaeng

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:28 AM - 09:28 AM	82.2	85.5	81.7
09:28 AM - 10:28 AM	82.3	85.3	81.8
10:28 AM - 11:28 AM	82.6	85.2	82.0
11:28 AM - 12:28 PM	82.7	86.6	82.2
12:28 PM - 01:28 PM	83.5	87.5	82.5
01:28 PM - 02:28 PM	83.2	86.2	82.7
02:28 PM - 03:28 PM	83.2	84.1	82.8
03:28 PM - 04:28 PM	83.3	84.7	82.8

Leq Average 8 hrs. (dB(A))	82.9
Lmax (dB(A))	87.5
Standard (dB(A))	85

Reference Method : ISO1996-1 and 1996-2

Standard : Environmental Impact Assessment Report of Gulf TS4 Co., Ltd.

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ในบริเวณพื้นที่โรงงานซึ่งมีลักษณะการวัดดังต่อไปนี้

Technical Management

Tharitat.

Approved by

Supot Salameh

Section Head

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Analysis / Test Report

Client : Gulf TS4 Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluk Daeng, Rayong Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GT54

Lot ID: 2345765

Date Received : May 19, 2023

Date Reported : May 25, 2023

Report Number: 2661656-1

Page 1 of 1

Sample Number	2345765-6
Parameter	Noise (Leq 8 hrs.)
Location	บริเวณ Steam Turbine Lube Oil Skid
Measurement Date	May 18, 2023
Measurement by	Thippong Buadaeng

Time	Leq (dB(A))	Lmax (dB(A))	L90 (dB(A))
08:20 AM - 09:20 AM	76.1	94.3	74.2
09:20 AM - 10:20 AM	74.4	78.2	74.1
10:20 AM - 11:20 AM	74.4	77.9	74.1
11:20 AM - 12:20 PM	74.6	77.1	74.0
12:20 PM - 01:20 PM	74.8	76.9	74.2
01:20 PM - 02:20 PM	75.0	77.0	74.3
02:20 PM - 03:20 PM	74.8	76.1	74.4
03:20 PM - 04:20 PM	74.6	75.9	74.3

Leq Average 8 hrs. (dB(A))	74.9
Lmax (dB(A))	94.3
Standard (dB(A))	85

Reference Method : ISO1996-1 and 1996-2

Standard : Environmental Impact Assessment Report of Gulf TS4 Co., Ltd.

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ในบริเวณพื้นที่โรงงานซึ่งมีลักษณะการวัดดังต่อไปนี้

Technical Management

Tharitat.

Approved by

Supot Salameh

Section Head

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ภาคผนวก ค-8

ความร้อนภายในสถานประกอบการ



Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng,
Rayong Thailand 21140

Lot ID: 2328420
Date Received : Mar 17, 2023
Date Reported : Mar 21, 2023
Report Number: 2592715-1

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Page 1 of 4

Sample Number 2328420-1
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Mar 15, 2023
Measurement by Nathapon Jengwarewong
Location บึงฉลวย 1 ซีก (ด้านอาคาร 4) (ดูแผนที่ : - แผนที่ : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
อาคาร Condenser Exhaust Unit	120	29.7	25.5	41.3	35.5
Average (WBGT)		29.7			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

- 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)
- 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

Supt S.

Supt. Salanthich
Section Head

Approved by

Wichan Chonharat

Wichan Chonharat
Assistant Manager

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S. Vongthong, Air Heat (M) (21140)



Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng,
Rayong Thailand 21140

Lot ID: 2328420
Date Received : Mar 17, 2023
Date Reported : Mar 21, 2023
Report Number: 2592715-1

P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Page 2 of 4

Sample Number 2328420-2
Parameter Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date Mar 15, 2023
Measurement by Nathapon Jengwarewong
Location บึงฉลวย 1 ซีก (ด้านอาคาร 4) (ดูแผนที่ : - แผนที่ : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
อาคาร Condenser Exhaust Unit	120	29.8	27.9	34.4	33.9
Average (WBGT)		29.8			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

- 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)
- 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

Supt S.

Supt. Salanthich
Section Head

Approved by

Wichan Chonharat

Wichan Chonharat
Assistant Manager

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13431-61 / EMAIL

S. Vongthong, Air Heat (M) (21140)



Analysis / Test Report

Client : Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng,
Rayong Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GT54

Lot ID: 2328420

Date Received : Mar 17, 2023
Date Reported : Mar 21, 2023
Report Number: 2592715-1

Page 3 of 4

Sample Number	2328420-3
Parameter	Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date	Mar 15, 2023
Measurement by	Nathaporn Jitwareewong
Location	ปล่องถ่าน 1 กู้ (ผ้า-วนวนอยู่ใกล้ถ่าน : - แทน : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
ปล่อง Gas Turbine	120	28.5	25.4	36.4	34.5
Average (WBGT)		28.5			
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 Salameh
Section Head

Approved by

Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng,
Rayong Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GT54

Lot ID: 2328420

Date Received : Mar 17, 2023
Date Reported : Mar 21, 2023
Report Number: 2592715-1

Page 4 of 4

Sample Number	2328420-4
Parameter	Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date	Mar 15, 2023
Measurement by	Nathaporn Jitwareewong
Location	ปล่องถ่าน 1 กู้ (ผ้า-วนวนอยู่ใกล้ถ่าน : - แทน : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
ปล่อง Gas Turbine	120	27.8	25.3	33.7	33.1
Average (WBGT)		27.8			
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 Salameh
Section Head

Approved by

Wichan Choonharat
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Analysis / Test Report

Client : Gulf TSI Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng,
Rayong Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GT54

Lot ID: 2328432

Date Received : May 19, 2023

Date Reported : May 23, 2023

Report Number: 2592716-1

Page 1 of 4

Sample Number	2328432-1
Parameter	Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date	May 18, 2023
Measurement by	Noranon Taithongkham
Location	เบ็ดเตล็ดงาน 1 คัด (เบ็ดเตล็ดงาน เบ็ดเตล็ดงาน : - แทน : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
เบ็ดเตล็ดงาน Condenser Exhaust Unit	120	30.4	26.6	39.4	38.6
Average (WBGT)		30.4			
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

Supt S.

Supot Salamteah
Section Head

Approved by

Wichan Choonharat

Wichan Choonharat
Assistant Manager

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13431-61 / Email

S. Vongpradit, 12/12/2023



Analysis / Test Report

Client : Gulf TSI Co., Ltd.

225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng,
Rayong Thailand 21140

P/O :

Project Name : Monitoring EIA

Project Location : GT54

Lot ID: 2328432

Date Received : May 19, 2023

Date Reported : May 23, 2023

Report Number: 2592716-1

Page 2 of 4

Sample Number	2328432-2
Parameter	Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date	May 18, 2023
Measurement by	Noranon Taithongkham
Location	เบ็ดเตล็ดงาน 1 คัด (เบ็ดเตล็ดงาน เบ็ดเตล็ดงาน : - แทน : -)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
เบ็ดเตล็ดงาน Condenser Exhaust Unit	120	29.3	25.7	38.0	37.4
Average (WBGT)		29.3			
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

Supt S.

Supot Salamteah
Section Head

Approved by

Wichan Choonharat

Wichan Choonharat
Assistant Manager

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13431-61 / Email

S. Vongpradit, 12/12/2023



Analysis / Test Report

Client: Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng,
Rayong Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2328432
Date Received : May 19, 2023
Date Reported : May 23, 2023
Report Number: 2592716-1

Page 3 of 4

Sample Number	2328432-3
Parameter	Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date	May 18, 2023
Measurement by	Norranon Taikongklam
Location	บริเวณงาน 1 หลัง (ใต้-แนวท่อ ถัดไปด้าน :- แดด :-)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Generator	120	29.7	26.4	37.8	36.4
Average (WBGT)		29.7			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

- 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)
- 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

Supt S.

Supot Salamtah
Section Head

Approved by

Wichan Choonharat

Wichan Choonharat
Assistant Manager

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5 Weights, Air Heat ref (19.1500)



Analysis / Test Report

Client: Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng,
Rayong Thailand 21140
P/O :
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2328432
Date Received : May 19, 2023
Date Reported : May 23, 2023
Report Number: 2592716-1

Page 4 of 4

Sample Number	2328432-4
Parameter	Heat Stress (Sampling Time : 10.00 AM - 12.00 PM)
Measurement Date	May 18, 2023
Measurement by	Norranon Taikongklam
Location	บริเวณงาน 1 หลัง (ใต้-แนวท่อ ถัดไปด้าน :- แดด :-)

Location	Duration (min)	WBGT (°C)	NWB (°C)	GT (°C)	DB (°C)
บริเวณ Gas Turbine	120	28.4	24.7	37.8	35.7
Average (WBGT)		28.4			
Guideline WBGT (°C)		34.0			

Reference Method : Wet Bulb Globe Temperature

Guideline:

- 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)
- 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

Supt S.

Supot Salamtah
Section Head

Approved by

Wichan Choonharat

Wichan Choonharat
Assistant Manager

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5 Weights, Air Heat ref (17.3500)

ภาคผนวก ค-9

แสงสว่างภายในสถานประกอบการ



Analysis / Test Report

Lot ID: 2328465

Client : Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Taat, Pluak Daeng, Rayong Thailand 21140
Date Received : Mar 21, 2023
P/O : GT54-4210500514
Date Reported : Mar 25, 2023
Project Name : Monitoring EIA
Report Number : 2601596-1 C6
Project Location : GT54

Page 1 of 2

Layer	Reference	Measurement	Measurement	Spot	Illuminance (Lux)	Guideline Limit	Comment
No.	No.	Date	Time	No.	Average	Spot/Min	Average
Area - Administration Building : 1st Floor : ห้องปฏิบัติการ							
1	2328465-1	15 Mar 2023	Day time	1	330	-	300-400
Spot - Administration Building : 1st Floor : ห้อง Admin. 1							
2	2328465-2	15 Mar 2023	Day time	1	478	-	400-500
Spot - Administration Building : 1st Floor : ห้อง Admin. 2							
3	2328465-3	15 Mar 2023	Day time	1	569	-	400-500
Spot - Administration Building : 1st Floor : ห้อง Operation Manager							
4	2328465-4	15 Mar 2023	Day time	1	570	-	400-500
Spot - Administration Building : 1st Floor : ห้อง EHS							
5	2328465-5	15 Mar 2023	Day time	1	434	-	400-500
Spot - Administration Building : 1st Floor : ห้อง EHS Manager							
6	2328465-6	15 Mar 2023	Day time	1	522	-	400-500
Spot - Administration Building : 1st Floor : ห้อง Admin. Manager							
7	2328465-7	15 Mar 2023	Day time	1	476	-	400-500
Spot - Administration Building : 1st Floor : ห้อง Plant Manager							
8	2328465-8	15 Mar 2023	Day time	1	510	-	400-500
Spot - Administration Building : 1st Floor : ห้อง IT							
9	2328465-9	15 Mar 2023	Day time	1	468	-	400-500
Spot - Administration Building : 1st Floor : ห้อง Admin. 1							
10	2328465-10	15 Mar 2023	Day time	1	433	-	400-500
Spot - Administration Building : 1st Floor : ห้อง Admin. 2							
11	2328465-11	15 Mar 2023	Day time	1	582	-	400-500
Area - Administration Building : 1st Floor : โรงเรือน							
12.1	2328465-12	15 Mar 2023	Day time	1	616	510.8	50
12.2	2328465-13	15 Mar 2023	Day time	2	414	-	100
12.3	2328465-14	15 Mar 2023	Day time	3	426	-	-
12.4	2328465-15	15 Mar 2023	Day time	4	539	-	-
12.5	2328465-16	15 Mar 2023	Day time	5	221	-	-
12.6	2328465-17	15 Mar 2023	Day time	6	849	-	-
Area - Administration Building : 1st Floor : ห้องปฏิบัติการ							
13.1	2328465-18	15 Mar 2023	Day time	1	290	303.5	150
13.2	2328465-19	15 Mar 2023	Day time	2	317	-	300

Technical Management

Support

Approved by

Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Lot ID: 2328465

Client : Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Taat, Pluak Daeng, Rayong Thailand 21140
Date Received : Mar 21, 2023
P/O : GT54-4210500514
Date Reported : Mar 25, 2023
Project Name : Monitoring EIA
Report Number : 2601596-1 C6
Project Location : GT54

Page 2 of 2

Layer	Reference	Measurement	Measurement	Spot	Illuminance (Lux)	Guideline Limit	Comment
No.	No.	Date	Time	No.	Average	Spot/Min	Average
Area - Administration Building : 1st Floor : ห้องปฏิบัติการ							
15.1	2328465-20	15 Mar 2023	Day time	1	289	401.2	150
15.2	2328465-21	15 Mar 2023	Day time	2	299	-	300
15.3	2328465-22	15 Mar 2023	Day time	3	214	-	214
15.4	2328465-23	15 Mar 2023	Day time	4	742	-	-
15.5	2328465-24	15 Mar 2023	Day time	5	543	-	-
15.6	2328465-25	15 Mar 2023	Day time	6	530	-	-
15.7	2328465-26	15 Mar 2023	Day time	7	622	-	-
15.8	2328465-27	15 Mar 2023	Day time	8	300	-	-
15.9	2328465-28	15 Mar 2023	Day time	9	338	-	-
15.10	2328465-29	15 Mar 2023	Day time	10	279	-	-
15.11	2328465-30	15 Mar 2023	Day time	11	309	-	-
15.12	2328465-31	15 Mar 2023	Day time	12	341	-	-
Area - Administration Building : 1st Floor : ห้อง Admin							
16.1	2328465-32	15 Mar 2023	Day time	1	323	379.5	150
16.2	2328465-33	15 Mar 2023	Day time	2	697	-	300
16.3	2328465-34	15 Mar 2023	Day time	3	298	-	-
16.4	2328465-35	15 Mar 2023	Day time	4	200	-	-
Area - Administration Building : 1st Floor : ห้องปฏิบัติการ							
17.1	2328465-36	15 Mar 2023	Day time	1	769	811.5	150
17.2	2328465-37	15 Mar 2023	Day time	2	754	-	300
17.3	2328465-38	15 Mar 2023	Day time	3	963	-	-
17.4	2328465-39	15 Mar 2023	Day time	4	760	-	-

Measurement by : Nathaporn Jengwareonvong 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

Support

Approved by

Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phuk Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2328472
Date Received : Mar 21, 2023
Date Reported : Mar 25, 2023
Report Number : 2601601-1 C6

Page 1 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Spot	Illuminance (Lux)	Guideline Limit	Comment
						Average	Spot/Min	Average
Area - CCR : Control Building : 1st Floor : Switchgear Room								
1.1	2328472-1	15 Mar 2023	Day time	1	500	304.1	100	200
1.2	2328472-2	15 Mar 2023	Day time	2	401			Pass
1.3	2328472-3	15 Mar 2023	Day time	3	453			
1.4	2328472-4	15 Mar 2023	Day time	4	390			
1.5	2328472-5	15 Mar 2023	Day time	5	202			
1.6	2328472-6	15 Mar 2023	Day time	6	178			
1.7	2328472-7	15 Mar 2023	Day time	7	412			
1.8	2328472-8	15 Mar 2023	Day time	8	244			
1.9	2328472-9	15 Mar 2023	Day time	9	300			
1.10	2328472-10	15 Mar 2023	Day time	10	252			
1.11	2328472-11	15 Mar 2023	Day time	11	200			
1.12	2328472-12	15 Mar 2023	Day time	12	251			
1.13	2328472-13	15 Mar 2023	Day time	13	138			
1.14	2328472-14	15 Mar 2023	Day time	14	342			
1.15	2328472-15	15 Mar 2023	Day time	15	548			
1.16	2328472-16	15 Mar 2023	Day time	16	470			
1.17	2328472-17	15 Mar 2023	Day time	17	344			
1.18	2328472-18	15 Mar 2023	Day time	18	320			
1.1	2328472-19	15 Mar 2023	Night time	1	435	345.3	100	200
1.2	2328472-20	15 Mar 2023	Night time	2	356			Pass
1.3	2328472-21	15 Mar 2023	Night time	3	419			
1.4	2328472-22	15 Mar 2023	Night time	4	452			
1.5	2328472-23	15 Mar 2023	Night time	5	237			
1.6	2328472-24	15 Mar 2023	Night time	6	159			
1.7	2328472-25	15 Mar 2023	Night time	7	363			
1.8	2328472-26	15 Mar 2023	Night time	8	235			
1.9	2328472-27	15 Mar 2023	Night time	9	359			
1.10	2328472-28	15 Mar 2023	Night time	10	470			
1.11	2328472-29	15 Mar 2023	Night time	11	278			
1.12	2328472-30	15 Mar 2023	Night time	12	288			
1.13	2328472-31	15 Mar 2023	Night time	13	290			
1.14	2328472-32	15 Mar 2023	Night time	14	350			
1.15	2328472-33	15 Mar 2023	Night time	15	433			
1.16	2328472-34	15 Mar 2023	Night time	16	569			

Technical Management
Supt S
Supt Salameh
Section Head

Approved by
Wichan Chonharat
Assistant Manager

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13/04/2024



Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phuk Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2328472
Date Received : Mar 21, 2023
Date Reported : Mar 25, 2023
Report Number : 2601601-1 C6

Page 2 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Spot	Illuminance (Lux)	Guideline Limit	Comment
						Average	Spot/Min	Average
Area - CCR : Control Building : 1st Floor : Switchgear Room								
1.17	2328472-35	15 Mar 2023	Night time	17	347			
1.18	2328472-36	15 Mar 2023	Night time	18	343			
Area - CCR : Control Building : 1st Floor : Warehouse								
2.1	2328472-37	15 Mar 2023	Day time	1	629	474.0	50	100
2.2	2328472-38	15 Mar 2023	Day time	2	591			Pass
2.3	2328472-39	15 Mar 2023	Day time	3	346			
2.4	2328472-40	15 Mar 2023	Day time	4	330			
2.1	2328472-41	15 Mar 2023	Night time	1	615	413.0	50	100
2.2	2328472-42	15 Mar 2023	Night time	2	606			
2.3	2328472-43	15 Mar 2023	Night time	3	276			
2.4	2328472-44	15 Mar 2023	Night time	4	155			

Measurement by : Natthapon Jitwaruechong 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
Supt S
Supt Salameh
Section Head

Approved by
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13/04/2024



Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Taat, Pluak Daeng, Rayong Thailand 211-40
P/O : GTS4-4210500514
Date Received : Mar 21, 2023
Date Reported : Jun 27, 2023
Project Name : Monitoring EIA
Project Location : GTS4
Report Number : 2601603-1 Rev. No.1 C6

Lot ID: 2328473

Page 1 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)	Spot	Average	Spot/Min	Average	Comment
Spot - CCR : Control Building : 3rd Floor : Control GTS4 No.1										
3	2328473-5	15 Mar 2023	Day time	1	501	-	400-500	-	-	Pass
3	2328473-6	15 Mar 2023	Night time	1	497	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : Control GTS4 No.2										
4	2328473-7	15 Mar 2023	Day time	1	444	-	400-500	-	-	Pass
4	2328473-8	15 Mar 2023	Night time	1	422	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : DC5										
5	2328473-9	15 Mar 2023	Day time	1	575	-	400-500	-	-	Pass
5	2328473-10	15 Mar 2023	Night time	1	550	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : Control GTS4 No.3										
6	2328473-11	15 Mar 2023	Day time	1	411	-	300-400	-	-	Pass
6	2328473-12	15 Mar 2023	Night time	1	412	-	300-400	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : Control GTS4 No.4										
7	2328473-13	15 Mar 2023	Day time	1	621	-	300-400	-	-	Pass
7	2328473-14	15 Mar 2023	Night time	1	592	-	300-400	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : 1st Daytime Operation										
8	2328473-15	15 Mar 2023	Day time	1	710	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : 1st Operation Manager										
9	2328473-16	15 Mar 2023	Day time	1	682	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : 1st Permit										
10	2328473-17	15 Mar 2023	Day time	1	596	-	400-500	-	-	Pass
10	2328473-18	15 Mar 2023	Night time	1	637	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : 1st Shift Leader Daytime										
11	2328473-19	15 Mar 2023	Day time	1	415	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : 1st Shift Leader GTS3										
12	2328473-20	15 Mar 2023	Day time	1	540	-	400-500	-	-	Pass
12	2328473-21	15 Mar 2023	Night time	1	570	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : 1st Shift Leader GTS4										
13	2328473-22	15 Mar 2023	Day time	1	571	-	400-500	-	-	Pass
13	2328473-23	15 Mar 2023	Night time	1	589	-	400-500	-	-	Pass

Technical Management

Supot Salameeh
Section Head

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Wichan Chonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Taat, Pluak Daeng, Rayong Thailand 211-40
P/O : GTS4-4210500514
Date Received : Mar 21, 2023
Date Reported : Jun 27, 2023
Project Name : Monitoring EIA
Project Location : GTS4
Report Number : 2601603-1 Rev. No.1 C6

Lot ID: 2328473

Page 2 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)	Spot	Average	Spot/Min	Average	Comment
Area - CCR : Control Building : 3rd Floor : Control GTS4										
14.1	2328473-24	15 Mar 2023	Day time	1	320	414.8	50	100	100	Pass
14.2	2328473-25	15 Mar 2023	Day time	2	693					
14.3	2328473-26	15 Mar 2023	Day time	3	212					
14.4	2328473-27	15 Mar 2023	Day time	4	314					
14.5	2328473-28	15 Mar 2023	Day time	5	535					
14.1	2328473-29	15 Mar 2023	Night time	1	393	511.6	50	100	100	Pass
14.2	2328473-30	15 Mar 2023	Night time	2	748					
14.3	2328473-31	15 Mar 2023	Night time	3	351					
14.4	2328473-32	15 Mar 2023	Night time	4	451					
14.5	2328473-33	15 Mar 2023	Night time	5	615					
Area - CCR : Control Building : 3rd Floor : Control GTS4										
15.1	2328473-34	15 Mar 2023	Day time	1	1,309	842.5	50	100	100	Pass
15.2	2328473-35	15 Mar 2023	Day time	2	376					
15.1	2328473-36	15 Mar 2023	Night time	1	172	191.5	50	100	100	Pass
15.2	2328473-37	15 Mar 2023	Night time	2	211					

Measurement by : Nathaporn Jengwongwong Personnel of ALS Laboratory Group (Thailand) Co., Ltd.
Guideline : Notification of Department of Labour Protection and Welfare, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)
Note : This Analysis test report is resubmitted to supersede report No. 2601603-1 Date Reported : Mar 24, 2023 due to revise analytical information.

Technical Management

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Wichan Chonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2328474
Date Received : Mar 21, 2023
Date Reported : Jun 27, 2023
Report Number : 2601605-1 Rev. No.1 C6

Page 1 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot / Area No.	Spot	Illuminance (Lux) Average	Guideline Limit Spot/Min	Average	Comment
Area - Electrical Building : ชั้น 2 : Battery Room									
1.1	2328474-1	15 Mar 2023	Day time	1	334	288.0	100	200	Pass
1.2	2328474-2	15 Mar 2023	Day time	2	242				
1.1	2328474-3	15 Mar 2023	Night time	1	374	310.0	100	200	Pass
1.2	2328474-4	15 Mar 2023	Night time	2	246				
Area - Electrical Building : ชั้น 2 : Electrical Room									
2.1	2328474-5	15 Mar 2023	Day time	1	630	1,166	100	200	Pass
2.2	2328474-6	15 Mar 2023	Day time	2	327				
2.3	2328474-7	15 Mar 2023	Day time	3	659				
2.4	2328474-8	15 Mar 2023	Day time	4	1,034				
2.5	2328474-9	15 Mar 2023	Day time	5	1,036				
2.6	2328474-10	15 Mar 2023	Day time	6	746				
2.7	2328474-11	15 Mar 2023	Day time	7	1,661				
2.8	2328474-12	15 Mar 2023	Day time	8	1,770				
2.9	2328474-13	15 Mar 2023	Day time	9	1,638				
2.10	2328474-14	15 Mar 2023	Day time	10	1,339				
2.11	2328474-15	15 Mar 2023	Day time	11	1,341				
2.12	2328474-16	15 Mar 2023	Day time	12	831				
2.13	2328474-17	15 Mar 2023	Day time	13	536				
2.14	2328474-18	15 Mar 2023	Day time	14	873				
2.15	2328474-19	15 Mar 2023	Day time	15	2,060				
2.16	2328474-20	15 Mar 2023	Day time	16	2,190				
2.17	2328474-21	15 Mar 2023	Day time	17	231				
2.18	2328474-22	15 Mar 2023	Day time	18	250				
2.1	2328474-23	15 Mar 2023	Night time	1	236	276.6	100	200	Pass
2.2	2328474-24	15 Mar 2023	Night time	2	256				
2.3	2328474-25	15 Mar 2023	Night time	3	496				
2.4	2328474-26	15 Mar 2023	Night time	4	243				
2.5	2328474-27	15 Mar 2023	Night time	5	136				
2.6	2328474-28	15 Mar 2023	Night time	6	241				
2.7	2328474-29	15 Mar 2023	Night time	7	263				
2.8	2328474-30	15 Mar 2023	Night time	8	257				
2.9	2328474-31	15 Mar 2023	Night time	9	318				
2.10	2328474-32	15 Mar 2023	Night time	10	387				
2.11	2328474-33	15 Mar 2023	Night time	11	288				

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Technical Management
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Wichan Choonharat
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Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2328474
Date Received : Mar 21, 2023
Date Reported : Jun 27, 2023
Report Number : 2601605-1 Rev. No.1 C6

Page 2 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot / Area No.	Spot	Illuminance (Lux) Average	Guideline Limit Spot/Min	Average	Comment
Area - Electrical Building : ชั้น 2 : Electrical Room									
2.12	2328474-34	15 Mar 2023	Night time	12	276				
2.13	2328474-35	15 Mar 2023	Night time	13	320				
2.14	2328474-36	15 Mar 2023	Night time	14	316				
2.15	2328474-37	15 Mar 2023	Night time	15	257				
2.16	2328474-38	15 Mar 2023	Night time	16	209				
2.17	2328474-39	15 Mar 2023	Night time	17	198				
2.18	2328474-40	15 Mar 2023	Night time	18	139				
Area - Electrical Building : ชั้น 1 : โรงผลิตน้ำ									
3.1	2328474-41	15 Mar 2023	Day time	1	17,200	13,155	50	100	Pass
3.2	2328474-42	15 Mar 2023	Day time	2	9,110				
3.1	2328474-43	15 Mar 2023	Night time	1	108	131.5	50	100	Pass
3.2	2328474-44	15 Mar 2023	Night time	2	155				
Area - Electrical Building : ชั้น 2 : โรงผลิตน้ำ									
4.1	2328474-45	15 Mar 2023	Day time	1	105	127.5	50	100	Pass
4.2	2328474-46	15 Mar 2023	Day time	2	150				

Measurement by : Nathaporn Jengwarewong 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)

Note : This Analysis test report is issued to supersede report No. 2601605-1 Date Reported : Mar 24, 2023 due to revise analytical information.

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Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf TS4 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phrak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Date Received : Mar 21, 2023
Date Reported : Mar 25, 2023
Report Number : 2601607-1 C6

Project Name : Monitoring EIA
Project Location : GTS4

Page 1 of 1

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)	Spot	Average	Spot/Min	Limit	Average	Comment
Spot - Electrical Building : Flu 3 : Switchgear											
1	2328475-1	15 Mar 2023	Day time	1	522	-	300-400	-	-	-	Pass
1	2328475-2	15 Mar 2023	Night time	1	504	-	300-400	-	-	-	Pass
Area - Electrical Building : Flu 3 : Warehouse											
2.1	2328475-3	15 Mar 2023	Day time	1	217	159.0	50	100	100	100	Pass
2.2	2328475-4	15 Mar 2023	Day time	2	101						
2.1	2328475-5	15 Mar 2023	Night time	1	130	106.0	50	100	100	100	Pass
2.2	2328475-6	15 Mar 2023	Night time	2	82						

Measurement by : Nathapon Jengwarewong Personnel of ALS Laboratory Group (Thailand) Co., Ltd.
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

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Wichan Chonharat
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Analysis / Test Report

Client : Gulf TS4 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phrak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Date Received : Mar 21, 2023
Date Reported : Mar 25, 2023
Report Number : 2601610-1 C6

Project Name : Monitoring EIA
Project Location : GTS4

Page 1 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)	Spot	Average	Spot/Min	Limit	Average	Comment
Area - Switchyard Control Building Plan : GTS3 : Battery Room											
1.1	2328476-1	15 Mar 2023	Day time	1	541	573.5	100	200	200	200	Pass
1.2	2328476-2	15 Mar 2023	Day time	2	606						
1.1	2328476-3	15 Mar 2023	Night time	1	555	527.5	100	200	200	200	Pass
1.2	2328476-4	15 Mar 2023	Night time	2	500						
Area - Switchyard Control Building Plan : GTS3 : Substation GTS3											
2.1	2328476-5	15 Mar 2023	Day time	1	277	478.3	100	200	200	200	Pass
2.2	2328476-6	15 Mar 2023	Day time	2	300						
2.3	2328476-7	15 Mar 2023	Day time	3	647						
2.4	2328476-8	15 Mar 2023	Day time	4	689						
2.1	2328476-9	15 Mar 2023	Night time	1	405	355.0	100	200	200	200	Pass
2.2	2328476-10	15 Mar 2023	Night time	2	279						
2.3	2328476-11	15 Mar 2023	Night time	3	534						
2.4	2328476-12	15 Mar 2023	Night time	4	202						
Spot - Switchyard Control Building Plan : GTS3 : Switchgear											
3	2328476-13	15 Mar 2023	Day time	1	351	-	300-400	-	-	-	Pass
3	2328476-14	15 Mar 2023	Night time	1	338	-	300-400	-	-	-	Pass
Area - Switchyard Control Building Plan : GTS3 : Switchyard Control Room											
4.1	2328476-15	15 Mar 2023	Day time	1	111	518.5	100	200	200	200	Pass
4.2	2328476-16	15 Mar 2023	Day time	2	230						
4.3	2328476-17	15 Mar 2023	Day time	3	653						
4.4	2328476-18	15 Mar 2023	Day time	4	1,080						
4.1	2328476-19	15 Mar 2023	Night time	1	121	303.8	100	200	200	200	Pass
4.2	2328476-20	15 Mar 2023	Night time	2	204						
4.3	2328476-21	15 Mar 2023	Night time	3	513						
4.4	2328476-22	15 Mar 2023	Night time	4	377						
Area - Switchyard Control Building Plan : GTS4 : Battery Room											
5.1	2328476-23	15 Mar 2023	Day time	1	503	525.5	100	200	200	200	Pass
5.2	2328476-24	15 Mar 2023	Day time	2	548						
5.1	2328476-25	15 Mar 2023	Night time	1	502	490.5	100	200	200	200	Pass
5.2	2328476-26	15 Mar 2023	Night time	2	479						

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Wichan Chonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phrak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2328476
Date Received : Mar 21, 2023
Date Reported : Mar 25, 2023
Report Number : 2601610-1 C6

Page 2 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)	Spot	Average	Spot/Min	Average	Guideline Limit	Comment
Area - Switchyard Control Building Plan : GTS4 : Substation GTS4											
6.1	2328476-27	15 Mar 2023	Day time	1	939	513.0	100	200		Pass	
6.2	2328476-28	15 Mar 2023	Day time	2	660						
6.3	2328476-29	15 Mar 2023	Day time	3	242						
6.4	2328476-30	15 Mar 2023	Day time	4	211						
6.1	2328476-31	15 Mar 2023	Night time	1	464	356.8	100	200		Pass	
6.2	2328476-32	15 Mar 2023	Night time	2	567						
6.3	2328476-33	15 Mar 2023	Night time	3	220						
6.4	2328476-34	15 Mar 2023	Night time	4	176						
Spot - Switchyard Control Building Plan : GTS4 : Switchgear											
7	2328476-35	15 Mar 2023	Day time	1	423	-	300-400	-		Pass	
7	2328476-36	15 Mar 2023	Night time	1	390	-	300-400	-		Pass	
Area - Switchyard Control Building Plan : GTS4 : Switchyard Control Room											
8.1	2328476-37	15 Mar 2023	Day time	1	1,310	701.0	100	200		Pass	
8.2	2328476-38	15 Mar 2023	Day time	2	706						
8.3	2328476-39	15 Mar 2023	Day time	3	420						
8.4	2328476-40	15 Mar 2023	Day time	4	368						
8.1	2328476-41	15 Mar 2023	Night time	1	534	471.3	100	200		Pass	
8.2	2328476-42	15 Mar 2023	Night time	2	603						
8.3	2328476-43	15 Mar 2023	Night time	3	401						
8.4	2328476-44	15 Mar 2023	Night time	4	347						

Measurement by : Naitthaporn Jengwareepong, 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)

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Technical Management

Approved by

Wichan Choonharat
Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phrak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2328477
Date Received : Mar 21, 2023
Date Reported : Mar 25, 2023
Report Number : 2601613-1 C6

Page 1 of 1

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)	Spot	Average	Spot/Min	Average	Guideline Limit	Comment
Spot - Water Treatment Control Building : Fire Pump											
1	2328477-1	15 Mar 2023	Day time	1	1,749	-	300-400	-		Pass	
1	2328477-2	15 Mar 2023	Day time	2	1,952	-	300				
1	2328477-3	15 Mar 2023	Day time	3	2,085	-	200				
1	2328477-4	15 Mar 2023	Night time	1	336	-	300-400	-		Pass	
Spot - Water Treatment Control Building : Laboratory 1 (Fume Hood)											
2	2328477-5	15 Mar 2023	Day time	1	550	-	400-500	-		Pass	
2	2328477-6	15 Mar 2023	Night time	1	541	-	400-500	-		Pass	
Spot - Water Treatment Control Building : Laboratory 2 (Water Table)											
3	2328477-7	15 Mar 2023	Day time	1	668	-	400-500	-		Pass	
3	2328477-8	15 Mar 2023	Night time	1	601	-	400-500	-		Pass	
Spot - Water Treatment Control Building : Office Laboratory											
4	2328477-9	15 Mar 2023	Day time	1	543	-	400-500	-		Pass	
4	2328477-10	15 Mar 2023	Night time	1	569	-	400-500	-		Pass	
Spot - Water Treatment Control Building : Water Treatment											
5	2328477-11	15 Mar 2023	Day time	1	623	-	300-400	-		Pass	
5	2328477-12	15 Mar 2023	Night time	1	598	-	300-400	-		Pass	

Measurement by : Naitthaporn Jengwareepong, 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)

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Technical Management

Approved by

Wichan Choonharat
Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf TS4 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2328478
Date Received : Mar 21, 2023
Date Reported : Mar 25, 2023
Report Number : 2601615-1 C6

Page 1 of 3									
Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot/Area No.	Illuminance (Lux)	Spot	Average	Spot/Min	Comment
1	Spot - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 1	15 Mar 2023	Day time	1	411	-	300-400	-	Pass
4	Spot - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 1	15 Mar 2023	Day time	1	459	-	400-500	-	Pass
5	Spot - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 2	15 Mar 2023	Day time	1	524	-	400-500	-	Pass
6	Spot - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 3	15 Mar 2023	Day time	1	422	-	400-500	-	Pass
7	Spot - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 4	15 Mar 2023	Day time	1	452	-	400-500	-	Pass
8	Spot - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 1	15 Mar 2023	Day time	1	439	-	400-500	-	Pass
9	Spot - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 2	15 Mar 2023	Day time	1	457	-	400-500	-	Pass
10	Spot - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 3	15 Mar 2023	Day time	1	418	-	400-500	-	Pass
11	Spot - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 4	15 Mar 2023	Day time	1	450	-	400-500	-	Pass
12	Spot - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 1	15 Mar 2023	Day time	1	420	-	400-500	-	Pass
13	Spot - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 2	15 Mar 2023	Day time	1	415	-	400-500	-	Pass
14	Spot - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 3	15 Mar 2023	Day time	1	414	-	400-500	-	Pass
15	Spot - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 4	15 Mar 2023	Day time	1	432	-	400-500	-	Pass
16	Spot - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 1	15 Mar 2023	Day time	1	423	-	400-500	-	Pass
17.1	Area - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 2	15 Mar 2023	Day time	1	751	591.3	50	100	Pass
17.2	2328478-16	15 Mar 2023	Day time	2	648				
17.3	2328478-17	15 Mar 2023	Day time	3	375				

Technical Management : Supt S. Section Head : Supt S. Section Head

Approved by : Wichan Chonharat Assistant Manager

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13/09/61 EIMR



Analysis / Test Report

Client : Gulf TS4 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2328478
Date Received : Mar 21, 2023
Date Reported : Mar 25, 2023
Report Number : 2601615-1 C6

Page 2 of 3									
Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot/Area No.	Illuminance (Lux)	Spot	Average	Spot/Min	Comment
18.1	Area - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 2	15 Mar 2023	Day time	1	121	113.5	50	100	Pass
18.2	2328478-19	15 Mar 2023	Day time	2	106				
19.1	Area - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 2	15 Mar 2023	Day time	1	96	109.5	50	100	Pass
19.2	2328478-21	15 Mar 2023	Day time	2	123				
20.1	Area - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 3	15 Mar 2023	Day time	1	404	392.0	150	300	Pass
20.2	2328478-23	15 Mar 2023	Day time	2	380				
21.1	Area - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 4	15 Mar 2023	Day time	1	333	340.5	50	100	Pass
21.2	2328478-25	15 Mar 2023	Day time	2	348				
22.1	Area - Workshop and Warehouse : 2nd Floor : โรงงานด้าน 1	15 Mar 2023	Day time	1	740	924.2	150	300	Pass
22.2	2328478-27	15 Mar 2023	Day time	2	771				
22.3	2328478-28	15 Mar 2023	Day time	3	646				
22.4	2328478-29	15 Mar 2023	Day time	4	941				
22.5	2328478-30	15 Mar 2023	Day time	5	931				
22.6	2328478-31	15 Mar 2023	Day time	6	1,516				
23.1	Area - Workshop and Warehouse : 2nd Floor : โรงงานด้าน W/H	15 Mar 2023	Day time	1	963	861.5	25	50	Pass
23.2	2328478-33	15 Mar 2023	Day time	2	760				

Technical Management : Supt S. Section Head : Supt S. Section Head

Approved by : Wichan Chonharat Assistant Manager

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Analysis / Test Report

Client : Gulf T&E Co., Ltd.
225 Moo 3, WPA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2328478
Date Received : Mar 21, 2023
Date Reported : Mar 25, 2023
Report Number : 2601615-1 C6

Page 2 of 3

Layout No.	Reference Number	Measurement Date	Measurement Time	Spot/Area No.	Illuminance (Lux) Spot	Average	Guideline Limit Spot/Min	Average	Comment
Area - Workshop and Warehouse : 2nd Floor : Store									
24.1	2328478-34	15 Mar 2023	Day time	1	939	848.5	50	100	Pass
24.2	2328478-35	15 Mar 2023	Day time	2	864				
24.3	2328478-36	15 Mar 2023	Day time	3	787				
24.4	2328478-37	15 Mar 2023	Day time	4	858				
24.5	2328478-38	15 Mar 2023	Day time	5	1,298				
24.6	2328478-39	15 Mar 2023	Day time	6	985				
24.7	2328478-40	15 Mar 2023	Day time	7	899				
24.8	2328478-41	15 Mar 2023	Day time	8	934				
24.9	2328478-42	15 Mar 2023	Day time	9	907				
24.10	2328478-43	15 Mar 2023	Day time	10	1,322				
24.11	2328478-44	15 Mar 2023	Day time	11	1,061				
24.12	2328478-45	15 Mar 2023	Day time	12	1,100				
24.13	2328478-46	15 Mar 2023	Day time	13	380				
24.14	2328478-47	15 Mar 2023	Day time	14	341				
24.15	2328478-48	15 Mar 2023	Day time	15	599				
24.16	2328478-49	15 Mar 2023	Day time	16	302				

Measurement by : Nakhaporn Jitngwarongwong, 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
Supt S
Supt Salameh
Section Head

Approved by
Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf T&E Co., Ltd.
225 Moo 3, WPA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2328479
Date Received : Mar 21, 2023
Date Reported : Mar 25, 2023
Report Number : 2601617-1 C6

Page 1 of 2

Layout No.	Reference Number	Measurement Date	Measurement Time	Spot/Area No.	Illuminance (Lux) Spot	Average	Guideline Limit Spot/Min	Average	Comment
Area - Workshop and Warehouse : Ground Floor : Store									
1.1	2328479-1	15 Mar 2023	Day time	1	303	297.2	50	100	Pass
1.2	2328479-2	15 Mar 2023	Day time	2	300				
1.3	2328479-3	15 Mar 2023	Day time	3	251				
1.4	2328479-4	15 Mar 2023	Day time	4	200				
1.5	2328479-5	15 Mar 2023	Day time	5	382				
1.6	2328479-6	15 Mar 2023	Day time	6	320				
1.7	2328479-7	15 Mar 2023	Day time	7	255				
1.8	2328479-8	15 Mar 2023	Day time	8	400				
1.9	2328479-9	15 Mar 2023	Day time	9	217				
1.10	2328479-10	15 Mar 2023	Day time	10	266				
1.11	2328479-11	15 Mar 2023	Day time	11	360				
1.12	2328479-12	15 Mar 2023	Day time	12	345				
1.13	2328479-13	15 Mar 2023	Day time	13	218				
1.14	2328479-14	15 Mar 2023	Day time	14	366				
1.15	2328479-15	15 Mar 2023	Day time	15	279				
1.16	2328479-16	15 Mar 2023	Day time	16	293				
Area - Workshop and Warehouse : Ground Floor : Warehouse W/H									
2.1	2328479-17	15 Mar 2023	Day time	1	1,065	671.5	50	100	Pass
2.2	2328479-18	15 Mar 2023	Day time	2	278				
Area - Workshop and Warehouse : Ground Floor : Warehouse W/H Turf									
3.1	2328479-19	15 Mar 2023	Day time	1	3,400	2,114	50	100	Pass
3.2	2328479-20	15 Mar 2023	Day time	2	828				
Area - Workshop and Warehouse : Ground Floor : Warehouse									
4.1	2328479-21	15 Mar 2023	Day time	1	220	306.3	50	100	Pass
4.2	2328479-22	15 Mar 2023	Day time	2	268				
4.3	2328479-23	15 Mar 2023	Day time	3	324				
4.4	2328479-24	15 Mar 2023	Day time	4	366				
4.5	2328479-25	15 Mar 2023	Day time	5	326				
4.6	2328479-26	15 Mar 2023	Day time	6	334				
Area - Workshop and Warehouse : Ground Floor : Warehouse Tool Room (AC 1-3)									
5.1	2328479-27	15 Mar 2023	Day time	1	747	716.3	50	100	Pass
5.2	2328479-28	15 Mar 2023	Day time	2	676				
5.3	2328479-29	15 Mar 2023	Day time	3	726				

Technical Management
Supt S
Supt Salameh
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Analysis / Test Report

Client : Gulf TS4 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Taot, Phrak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2328479
Date Received : Mar 21, 2023
Date Reported : Mar 25, 2023
Report Number : 2601617-1 C6

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)	Spot	Average	Spot/Min	Guideline Limit	Comment
6	Spot - Workshop and Warehouse : Ground Floor : via W/H Office 1 TS3	15 Mar 2023	Day time	1	513	-	-	400-500	-	Pass
7	Spot - Workshop and Warehouse : Ground Floor : via W/H Office 2 TS4	15 Mar 2023	Day time	1	545	-	-	400-500	-	Pass
8	Spot - Workshop and Warehouse : Ground Floor : tat Calibration tat tat tat tat tat tat tat tat tat tat	15 Mar 2023	Day time	1	456	-	-	400-500	-	Pass
9.1	Area - Workshop and Warehouse : Ground Floor : tat tat tat tat tat tat tat tat tat tat	15 Mar 2023	Day time	1	618	552.8	150	300	Pass	
9.2	2328479-34	15 Mar 2023	Day time	2	575					
9.3	2328479-35	15 Mar 2023	Day time	3	658					
9.4	2328479-36	15 Mar 2023	Day time	4	372					
9.5	2328479-37	15 Mar 2023	Day time	5	502					
9.6	2328479-38	15 Mar 2023	Day time	6	464					
9.7	2328479-39	15 Mar 2023	Day time	7	442					
9.8	2328479-40	15 Mar 2023	Day time	8	784					
9.9	2328479-41	15 Mar 2023	Day time	9	560					

Measurement by : Nathaphon Jengwongwong 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 Salaminth
Section Head

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Analysis / Test Report

Client : Gulf TS4 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Taot, Phrak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2345511
Date Received : May 19, 2023
Date Reported : Jun 27, 2023
Report Number : 2657729-1 C6

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)	Spot	Average	Spot/Min	Guideline Limit	Comment
1	Spot - Administration Building : 1st Floor : tat tat tat tat tat tat tat tat tat tat	17 May 2023	Day time	1	306	-	-	300-400	-	Pass
2	Spot - Administration Building : 1st Floor : tat Admin. 1	17 May 2023	Day time	1	418	-	-	400-500	-	Pass
3	Spot - Administration Building : 1st Floor : tat Admin. 2	17 May 2023	Day time	1	491	-	-	400-500	-	Pass
4	Spot - Administration Building : 1st Floor : tat Operation Manager	17 May 2023	Day time	1	471	-	-	400-500	-	Pass
5	Spot - Administration Building : 1st Floor : tat EHS	17 May 2023	Day time	1	445	-	-	400-500	-	Pass
6	Spot - Administration Building : 1st Floor : tat EHS Manager	17 May 2023	Day time	1	903	-	-	400-500	-	Pass
7	Spot - Administration Building : 1st Floor : tat Admin. Manager	17 May 2023	Day time	1	405	-	-	400-500	-	Pass
8	Spot - Administration Building : 1st Floor : tat Plant Manager	17 May 2023	Day time	1	412	-	-	400-500	-	Pass
9	Spot - Administration Building : 1st Floor : tat IT	17 May 2023	Day time	1	415	-	-	400-500	-	Pass
10	Spot - Administration Building : 1st Floor : tat tat tat tat tat tat tat tat tat tat	17 May 2023	Day time	1	502	-	-	400-500	-	Pass
11	Spot - Administration Building : 1st Floor : tat tat tat tat tat tat tat tat tat tat	17 May 2023	Day time	1	475	-	-	400-500	-	Pass
12.1	Area - Administration Building : 1st Floor : tat tat tat tat tat tat tat tat tat tat	17 May 2023	Day time	1	535	308.8	50	100	Pass	
12.2	2345511-13	17 May 2023	Day time	2	169					
12.3	2345511-14	17 May 2023	Day time	3	376					
12.4	2345511-15	17 May 2023	Day time	4	264					
12.5	2345511-16	17 May 2023	Day time	5	311					
12.6	2345511-17	17 May 2023	Day time	6	198					
13.1	Area - Administration Building : 1st Floor : tat tat tat tat tat tat tat tat tat tat	17 May 2023	Day time	1	309	306.5	150	300	Pass	
13.2	2345511-19	17 May 2023	Day time	2	304					

Technical Management
Supot Salaminth
Section Head

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Assistant Manager

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Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phuk Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2345511
Date Received : May 19, 2023
Date Reported : Jun 27, 2023
Report Number : 2657729-1 C6

Page 2 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux) Spot	Average	Guideline Limit Spot/Min	Average	Comment
Area - Administration Building : 1st Floor : 1st Floor : 1st Floor									
15.1	2345511-20	17 May 2023	Day time	1	205	338.7	150	300	Pass
15.2	2345511-21	17 May 2023	Day time	2	226				
15.3	2345511-22	17 May 2023	Day time	3	261				
15.4	2345511-23	17 May 2023	Day time	4	310				
15.5	2345511-24	17 May 2023	Day time	5	422				
15.6	2345511-25	17 May 2023	Day time	6	430				
15.7	2345511-26	17 May 2023	Day time	7	320				
15.8	2345511-27	17 May 2023	Day time	8	324				
15.9	2345511-28	17 May 2023	Day time	9	336				
15.10	2345511-29	17 May 2023	Day time	10	411				
15.11	2345511-30	17 May 2023	Day time	11	421				
15.12	2345511-31	17 May 2023	Day time	12	398				
Area - Administration Building : 1st Floor : 1st Floor									
16.1	2345511-32	17 May 2023	Day time	1	375	352.0	150	300	Pass
16.2	2345511-33	17 May 2023	Day time	2	344				
16.3	2345511-34	17 May 2023	Day time	3	343				
16.4	2345511-35	17 May 2023	Day time	4	346				
Area - Administration Building : 1st Floor : 1st Floor									
17.1	2345511-36	17 May 2023	Day time	1	354	421.3	150	300	Pass
17.2	2345511-37	17 May 2023	Day time	2	491				
17.3	2345511-38	17 May 2023	Day time	3	346				
17.4	2345511-39	17 May 2023	Day time	4	494				

Measurement by : Noranon Tathongbham 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 Salameh
Section Head

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Assistant Manager

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Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phuk Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2345514
Date Received : May 19, 2023
Date Reported : Jun 27, 2023
Report Number : 2657734-1 C6

Page 1 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux) Spot	Average	Guideline Limit Spot/Min	Average	Comment
Area - CCR : Control Building : 1st Floor : Switchgear Room									
1.1	2345514-1	17 May 2023	Day time	1	237	255.3	100	200	Pass
1.2	2345514-2	17 May 2023	Day time	2	274				
1.3	2345514-3	17 May 2023	Day time	3	266				
1.4	2345514-4	17 May 2023	Day time	4	281				
1.5	2345514-5	17 May 2023	Day time	5	275				
1.6	2345514-6	17 May 2023	Day time	6	219				
1.7	2345514-7	17 May 2023	Day time	7	231				
1.8	2345514-8	17 May 2023	Day time	8	244				
1.9	2345514-9	17 May 2023	Day time	9	246				
1.10	2345514-10	17 May 2023	Day time	10	251				
1.11	2345514-11	17 May 2023	Day time	11	261				
1.12	2345514-12	17 May 2023	Day time	12	241				
1.13	2345514-13	17 May 2023	Day time	13	246				
1.14	2345514-14	17 May 2023	Day time	14	232				
1.15	2345514-15	17 May 2023	Day time	15	271				
1.16	2345514-16	17 May 2023	Day time	16	266				
1.17	2345514-17	17 May 2023	Day time	17	274				
1.18	2345514-18	17 May 2023	Day time	18	280				
1.1	2345514-19	17 May 2023	Night time	1	349	315.4	100	200	Pass
1.2	2345514-20	17 May 2023	Night time	2	282				
1.3	2345514-21	17 May 2023	Night time	3	284				
1.4	2345514-22	17 May 2023	Night time	4	322				
1.5	2345514-23	17 May 2023	Night time	5	160				
1.6	2345514-24	17 May 2023	Night time	6	209				
1.7	2345514-25	17 May 2023	Night time	7	311				
1.8	2345514-26	17 May 2023	Night time	8	327				
1.9	2345514-27	17 May 2023	Night time	9	348				
1.10	2345514-28	17 May 2023	Night time	10	315				
1.11	2345514-29	17 May 2023	Night time	11	366				
1.12	2345514-30	17 May 2023	Night time	12	374				
1.13	2345514-31	17 May 2023	Night time	13	219				
1.14	2345514-32	17 May 2023	Night time	14	364				
1.15	2345514-33	17 May 2023	Night time	15	319				
1.16	2345514-34	17 May 2023	Night time	16	394				

Technical Management
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Section Head

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Analysis / Test Report

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225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Date Received : May 19, 2023
Date Reported : Jun 27, 2023
Project Name : Monitoring EIA
Project Location : GTS4
Report Number : 2657734-1 C6

Lot ID: 2345514

Page 2 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot/Area No.	Illuminance (Lux)	Spot	Average	Spot/Min	Limit	Average	Comment
Area - CCR : Control Building : 1st Floor : Switchgear Room											
1.17	2345514-35	17 May 2023	Night time	17	364						
1.18	2345514-36	17 May 2023	Night time	18	371						
Area - CCR : Control Building : 1st Floor : ควบคุมอาคาร											
2.1	2345514-37	17 May 2023	Day time	1	250	231.0	50	100	Pass		
2.2	2345514-38	17 May 2023	Day time	2	212						
2.1	2345514-39	17 May 2023	Night time	1	352	313.5	50	100	Pass		
2.2	2345514-40	17 May 2023	Night time	2	275						

Measurement by : Norranon Talhongkham 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

Supt S.

Supot Salantich
Section Head

Approved by

Wichan Choonharat

Wichan Choonharat
Assistant Manager

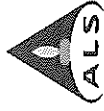
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RIGHT SOLUTIONS

1343 61 PMA



Analysis / Test Report

Client : Gulf T54 Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Date Received : May 19, 2023
Date Reported : Jun 27, 2023
Project Name : Monitoring EIA
Project Location : GTS4
Report Number : 2657735-1 C6

Lot ID: 2345515

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Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot/Area No.	Illuminance (Lux)	Spot	Average	Spot/Min	Limit	Average	Comment
Spot - CCR : Control Building : 3rd Floor : Control GTS3 No.1											
1	2345515-1	17 May 2023	Day time	1	414	-	-	400-500	-	-	Pass
1	2345515-2	17 May 2023	Night time	1	402	-	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : Control GTS3 No.2											
2	2345515-3	17 May 2023	Day time	1	403	-	-	400-500	-	-	Pass
2	2345515-4	17 May 2023	Night time	1	400	-	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : Control GTS4 No.1											
3	2345515-5	17 May 2023	Day time	1	439	-	-	400-500	-	-	Pass
3	2345515-6	17 May 2023	Night time	1	448	-	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : Control GTS4 No.2											
4	2345515-7	17 May 2023	Day time	1	434	-	-	400-500	-	-	Pass
4	2345515-8	17 May 2023	Night time	1	405	-	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : DCS											
5	2345515-9	17 May 2023	Day time	1	494	-	-	400-500	-	-	Pass
5	2345515-10	17 May 2023	Night time	1	488	-	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : ควบคุมอาคาร											
6	2345515-11	17 May 2023	Day time	1	306	-	-	300-400	-	-	Pass
6	2345515-12	17 May 2023	Night time	1	305	-	-	300-400	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : ควบคุมอาคารและควบคุมอาคาร											
7	2345515-13	17 May 2023	Day time	1	481	-	-	300-400	-	-	Pass
7	2345515-14	17 May 2023	Night time	1	472	-	-	300-400	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : 1st Daytime Operation											
8	2345515-15	17 May 2023	Day time	1	617	-	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : 1st Operation Manager											
9	2345515-16	17 May 2023	Day time	1	505	-	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : 1st Permit											
10	2345515-17	17 May 2023	Day time	1	474	-	-	400-500	-	-	Pass
10	2345515-18	17 May 2023	Night time	1	547	-	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : 1st Shift Leader Daytime											
11	2345515-19	17 May 2023	Day time	1	561	-	-	400-500	-	-	Pass
Spot - CCR : Control Building : 3rd Floor : 1st Shift Leader GTS3											
12	2345515-20	17 May 2023	Day time	1	511	-	-	400-500	-	-	Pass
12	2345515-21	17 May 2023	Night time	1	507	-	-	400-500	-	-	Pass

Technical Management

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Assistant Manager

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RIGHT SOLUTIONS

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Analysis / Test Report

Lot ID: 2345515

Client : Gulf T&E Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phuk Daeng, Rayong Thailand 21140
P/O : GT54-4210500514
Date Received : May 19, 2023
Date Reported : Jun 27, 2023
Project Name : Monitoring EIA
Report Number : 2657735-1 C6
Project Location : GT54

Page 2 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Spot	Illuminance (Lux)	Guideline Limit	Comment
Spot - CCR : Control Building : 3rd Floor : 1st Shift Leader GT54								
13	2345515-22	17 May 2023	Day time	1	490	-	400-500	Pass
13	2345515-23	17 May 2023	Night time	1	495	-	400-500	Pass
Area - CCR : Control Building : 3rd Floor : 1st Shift								
14.1	2345515-24	17 May 2023	Day time	1	228	451.2	50	100
14.2	2345515-25	17 May 2023	Day time	2	648			
14.3	2345515-26	17 May 2023	Day time	3	549			
14.4	2345515-27	17 May 2023	Day time	4	618			
14.5	2345515-28	17 May 2023	Day time	5	213			
14.1	2345515-29	17 May 2023	Night time	1	358	324.2	50	100
14.2	2345515-30	17 May 2023	Night time	2	363			
14.3	2345515-31	17 May 2023	Night time	3	356			
14.4	2345515-32	17 May 2023	Night time	4	307			
14.5	2345515-33	17 May 2023	Night time	5	237			
Area - CCR : Control Building : 3rd Floor : 1st Shift								
15.1	2345515-34	17 May 2023	Day time	1	914	631.0	50	100
15.2	2345515-35	17 May 2023	Day time	2	348			
15.1	2345515-36	17 May 2023	Night time	1	148	150.0	50	100
15.2	2345515-37	17 May 2023	Night time	2	152			

Measurement by : Nonanon Tathongpham 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
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Section Head

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Assistant Manager

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Analysis / Test Report

Lot ID: 2345516

Client : Gulf T&E Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phuk Daeng, Rayong Thailand 21140
P/O : GT54-4210500514
Date Received : May 19, 2023
Date Reported : Jun 27, 2023
Project Name : Monitoring EIA
Report Number : 2663875-1 C6
Project Location : GT54

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Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Spot	Illuminance (Lux)	Guideline Limit	Comment
Area - Electrical Building : 2nd Floor : 2nd Shift								
1.1	2345516-1	17 May 2023	Day time	1	361	316.5	100	200
1.2	2345516-2	17 May 2023	Day time	2	272			
1.1	2345516-3	17 May 2023	Night time	1	212	200.0	100	200
1.2	2345516-4	17 May 2023	Night time	2	188			
Area - Electrical Building : 2nd Floor : 2nd Shift								
2.1	2345516-5	17 May 2023	Day time	1	1,704	1,355	100	200
2.2	2345516-6	17 May 2023	Day time	2	1,044			
2.3	2345516-7	17 May 2023	Day time	3	879			
2.4	2345516-8	17 May 2023	Day time	4	981			
2.5	2345516-9	17 May 2023	Day time	5	1,196			
2.6	2345516-10	17 May 2023	Day time	6	391			
2.7	2345516-11	17 May 2023	Day time	7	2,540			
2.8	2345516-12	17 May 2023	Day time	8	2,520			
2.9	2345516-13	17 May 2023	Day time	9	1,756			
2.10	2345516-14	17 May 2023	Day time	10	2,060			
2.11	2345516-15	17 May 2023	Day time	11	460			
2.12	2345516-16	17 May 2023	Day time	12	1,019			
2.13	2345516-17	17 May 2023	Day time	13	1,700			
2.14	2345516-18	17 May 2023	Day time	14	1,514			
2.15	2345516-19	17 May 2023	Day time	15	849			
2.16	2345516-20	17 May 2023	Day time	16	599			
2.17	2345516-21	17 May 2023	Day time	17	1,461			
2.18	2345516-22	17 May 2023	Day time	18	1,714			
2.1	2345516-23	17 May 2023	Night time	1	358	252.3	100	200
2.2	2345516-24	17 May 2023	Night time	2	189			
2.3	2345516-25	17 May 2023	Night time	3	198			
2.4	2345516-26	17 May 2023	Night time	4	247			
2.5	2345516-27	17 May 2023	Night time	5	300			
2.6	2345516-28	17 May 2023	Night time	6	208			
2.7	2345516-29	17 May 2023	Night time	7	229			
2.8	2345516-30	17 May 2023	Night time	8	275			
2.9	2345516-31	17 May 2023	Night time	9	315			
2.10	2345516-32	17 May 2023	Night time	10	161			
2.11	2345516-33	17 May 2023	Night time	11	190			

Technical Management
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Analysis / Test Report

Client : Gulf T&A Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2345516
Date Received : May 19, 2023
Date Reported : Jun 27, 2023
Report Number : 2655875-1 C6

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Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)	Spot	Average	Spot/Min	Average	Comment
Area - Electrical Building : 2 : Electrical Room										
2.12	2345516-34	17 May 2023	Night time	12	246					
2.13	2345516-35	17 May 2023	Night time	13	314					
2.14	2345516-36	17 May 2023	Night time	14	331					
2.15	2345516-37	17 May 2023	Night time	15	188					
2.16	2345516-38	17 May 2023	Night time	16	300					
2.17	2345516-39	17 May 2023	Night time	17	248					
2.18	2345516-40	17 May 2023	Night time	18	244					
Area - Electrical Building : 2 : 3 : 4 : 5 : 6 : 7 : 8 : 9 : 10 : 11 : 12 : 13 : 14 : 15 : 16 : 17 : 18 : 19 : 20 : 21 : 22 : 23 : 24 : 25 : 26 : 27 : 28 : 29 : 30 : 31 : 32 : 33 : 34 : 35 : 36 : 37 : 38 : 39 : 40 : 41 : 42 : 43 : 44 : 45 : 46 : 47 : 48 : 49 : 50 : 51 : 52 : 53 : 54 : 55 : 56 : 57 : 58 : 59 : 60 : 61 : 62 : 63 : 64 : 65 : 66 : 67 : 68 : 69 : 70 : 71 : 72 : 73 : 74 : 75 : 76 : 77 : 78 : 79 : 80 : 81 : 82 : 83 : 84 : 85 : 86 : 87 : 88 : 89 : 90 : 91 : 92 : 93 : 94 : 95 : 96 : 97 : 98 : 99 : 100 : 101 : 102 : 103 : 104 : 105 : 106 : 107 : 108 : 109 : 110 : 111 : 112 : 113 : 114 : 115 : 116 : 117 : 118 : 119 : 120 : 121 : 122 : 123 : 124 : 125 : 126 : 127 : 128 : 129 : 130 : 131 : 132 : 133 : 134 : 135 : 136 : 137 : 138 : 139 : 140 : 141 : 142 : 143 : 144 : 145 : 146 : 147 : 148 : 149 : 150 : 151 : 152 : 153 : 154 : 155 : 156 : 157 : 158 : 159 : 160 : 161 : 162 : 163 : 164 : 165 : 166 : 167 : 168 : 169 : 170 : 171 : 172 : 173 : 174 : 175 : 176 : 177 : 178 : 179 : 180 : 181 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1584 : 1585 : 1586 : 1587 : 1588 : 1589 : 1590 : 1591 : 1592 : 1593 : 1594 : 1595 : 1596 : 1597 : 1598 : 1599 : 1600 : 1601 : 1602 : 1603 : 1604 : 1605 : 1606 : 1607 : 1608 : 1609 : 1610 : 1611 : 1612 : 1613 : 1614 : 1615 : 1616 : 1617 : 1618 : 1619 : 1620 : 1621 : 1622 : 1623 : 1624 : 1625 : 1626 : 1627 : 1628 : 1629 : 1630 : 1631 : 1632 : 1633 : 1634 : 1635 : 1636 : 1637 : 1638 : 1639 : 1640 : 1641 : 1642 : 1643 : 1644 : 1645 : 1646 : 1647 : 1648 : 1649 : 1650 : 1651 : 1652 : 1653 : 1654 : 1655 : 1656 : 1657 : 1658 : 1659 : 1660 : 1661 : 1662 : 1663 : 1664 : 1665 : 1666 : 1667 : 1668 : 1669 : 1670 : 1671 : 1672 : 1673 : 1674 : 1675 : 1676 : 1677 : 1678 : 1679 : 1680 : 1681 : 1682 : 1683 : 1684 : 1685 : 1686 : 1687 : 1688 : 1689 : 1690 : 1691 : 1692 : 1693 : 1694 : 1695 : 1696 : 1697 : 1698 : 1699 : 1700 : 1701 : 1702 : 1703 : 1704 : 1705 : 1706 : 1707 : 1708 : 1709 : 1710 : 1711 : 1712 : 1713 : 1714 : 1715 : 1716 : 1717 : 1718 : 1719 : 1720 : 1721 : 1722 : 1723 : 1724 : 1725 : 1726 : 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1870 : 1871 : 1872 : 1873 : 1874 : 1875 : 1876 : 1877 : 1878 : 1879 : 1880 : 1881 : 1882 : 1883 : 1884 : 1885 : 1886 : 1887 : 1888 : 1889 : 1890 : 1891 : 1892 : 1893 : 1894 : 1895 : 1896 : 1897 : 1898 : 1899 : 1900 : 1901 : 1902 : 1903 : 1904 : 1905 : 1906 : 1907 : 1908 : 1909 : 1910 : 1911 : 1912 : 1913 : 1914 : 1915 : 1916 : 1917 : 1918 : 1919 : 1920 : 1921 : 1922 : 1923 : 1924 : 1925 : 1926 : 1927 : 1928 : 1929 : 1930 : 1931 : 1932 : 1933 : 1934 : 1935 : 1936 : 1937 : 1938 : 1939 : 1940 : 1941 : 1942 : 1943 : 1944 : 1945 : 1946 : 1947 : 1948 : 1949 : 1950 : 1951 : 1952 : 1953 : 1954 : 1955 : 1956 : 1957 : 1958 : 1959 : 1960 : 1961 : 1962 : 1963 : 1964 : 1965 : 1966 : 1967 : 1968 : 1969 : 1970 : 1971 : 1972 : 1973 : 1974 : 1975 : 1976 : 1977 : 1978 : 1979 : 1980 : 1981 : 1982 : 1983 : 1984 : 1985 : 1986 : 1987 : 1988 : 1989 : 1990 : 1991 : 1992 : 1993 : 1994 : 1995 : 1996 : 1997 : 1998 : 1999 : 2000 : 2001 : 2002 : 2003 : 2004 : 2005 : 2006 : 2007 : 2008 : 2009 : 2010 : 2011 : 2012 : 2013 : 2014 : 2015 : 2016 : 2017 : 2018 : 2019 : 2020 : 2021 : 2022 : 2023 : 2024 : 2025 : 2026 : 2027 : 2028 : 2029 : 2030 : 2031 : 2032 : 2033 : 2034 : 2035 : 2036 : 2037 : 2038 : 2039 : 2040 : 2041 : 2042 : 2043 : 2044 : 2045 : 2046 : 2047 : 2048 : 2049 : 2050 : 2051 : 2052 : 2053 : 2054 : 2055 : 2056 : 2057 : 2058 : 2059 : 2060 : 2061 : 2062 : 2063 : 2064 : 2065 : 2066 : 2067 : 2068 : 2069 : 2070 : 2071 : 2072 : 2073 : 2074 : 2075 : 2076 : 2077 : 2078 : 2079 : 2080 : 2081 : 2										



Analysis / Test Report

Lot ID: 2345518

Date Received : May 19, 2023
Date Reported : Jun 27, 2023
Report Number : 2657745-1 C6

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
P/O : GT54-4210500514
Project Name : Monitoring EIA
Project Location : GT54

Page 1 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Spot	Illuminance (Lux) Average	Guideline Limit Spot/Min	Average	Comment
Area - Switchyard Control Building Plan : GT53 : Battery Room									
1.1	2345518-1	17 May 2023	Day time	1	206	201.0	100	200	Pass
1.2	2345518-2	17 May 2023	Day time	2	196				
1.1	2345518-3	17 May 2023	Night time	1	204	201.0	100	200	Pass
1.2	2345518-4	17 May 2023	Night time	2	198				
Area - Switchyard Control Building Plan : GT53 : Substation GT53									
2.1	2345518-5	17 May 2023	Day time	1	421	308.8	100	200	Pass
2.2	2345518-6	17 May 2023	Day time	2	404				
2.3	2345518-7	17 May 2023	Day time	3	305				
2.4	2345518-8	17 May 2023	Day time	4	105				
2.1	2345518-9	17 May 2023	Night time	1	163	237.3	100	200	Pass
2.2	2345518-10	17 May 2023	Night time	2	266				
2.3	2345518-11	17 May 2023	Night time	3	353				
2.4	2345518-12	17 May 2023	Night time	4	167				
Spot - Switchyard Control Building Plan : GT53 : Switchgear									
3	2345518-13	17 May 2023	Day time	1	305	-	300-400	-	Pass
3	2345518-14	17 May 2023	Night time	1	314	-	300-400	-	Pass
Area - Switchyard Control Building Plan : GT53 : Switchyard Control Room									
4.1	2345518-15	17 May 2023	Day time	1	637	365.5	100	200	Pass
4.2	2345518-16	17 May 2023	Day time	2	468				
4.3	2345518-17	17 May 2023	Day time	3	246				
4.4	2345518-18	17 May 2023	Day time	4	111				
4.1	2345518-19	17 May 2023	Night time	1	324	328.8	100	200	Pass
4.2	2345518-20	17 May 2023	Night time	2	318				
4.3	2345518-21	17 May 2023	Night time	3	323				
4.4	2345518-22	17 May 2023	Night time	4	350				
Area - Switchyard Control Building Plan : GT54 : Battery Room									
5.1	2345518-23	17 May 2023	Day time	1	357	347.5	100	200	Pass
5.2	2345518-24	17 May 2023	Day time	2	338				
5.1	2345518-25	17 May 2023	Night time	1	340	358.5	100	200	Pass
5.2	2345518-26	17 May 2023	Night time	2	377				

Technical Management

Supt S

Supot Salamtch
Section Head

Approved by

Wichan Choonharat

Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Lot ID: 2345518

Date Received : May 19, 2023
Date Reported : Jun 27, 2023
Report Number : 2657745-1 C6

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong Thailand 21140
P/O : GT54-4210500514
Project Name : Monitoring EIA
Project Location : GT54

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Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Spot	Illuminance (Lux) Average	Guideline Limit Spot/Min	Average	Comment
Area - Switchyard Control Building Plan : GT54 : Substation GT54									
6.1	2345518-27	17 May 2023	Day time	1	602	361.0	100	200	Pass
6.2	2345518-28	17 May 2023	Day time	2	477				
6.3	2345518-29	17 May 2023	Day time	3	200				
6.4	2345518-30	17 May 2023	Day time	4	165				
6.1	2345518-31	17 May 2023	Night time	1	340	327.5	100	200	Pass
6.2	2345518-32	17 May 2023	Night time	2	316				
6.3	2345518-33	17 May 2023	Night time	3	257				
6.4	2345518-34	17 May 2023	Night time	4	397				
Spot - Switchyard Control Building Plan : GT54 : Switchgear									
7	2345518-35	17 May 2023	Day time	1	345	-	300-400	-	Pass
7	2345518-36	17 May 2023	Night time	1	389	-	300-400	-	Pass
Area - Switchyard Control Building Plan : GT54 : Switchyard Control Room									
8.1	2345518-37	17 May 2023	Day time	1	272	370.3	100	200	Pass
8.2	2345518-38	17 May 2023	Day time	2	438				
8.3	2345518-39	17 May 2023	Day time	3	351				
8.4	2345518-40	17 May 2023	Day time	4	420				
8.1	2345518-41	17 May 2023	Night time	1	366	409.5	100	200	Pass
8.2	2345518-42	17 May 2023	Night time	2	378				
8.3	2345518-43	17 May 2023	Night time	3	470				
8.4	2345518-44	17 May 2023	Night time	4	424				

Measurement by : Noranon Taibongkham Personnel of ALS Laboratory Group (Thailand) Co., Ltd.

Guideline : Notification of Department of Labour Protection and Welfare, O.E.2560 (2017) dated November 27, B.E.2560 (2017), and published in the Royal Government Gazette, Vol.135, Part 390 dated February 21 B.E.2561 (2018)

Technical Management

Supt S

Supot Salamtch
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Approved by

Wichan Choonharat

Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasil, Phrak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2345519
Date Received : May 19, 2023
Date Reported : Jun 27, 2023
Report Number : 265746-1 C6

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Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Spot	Illuminance (Lux)	Guideline Limit	Comment
Spot - Water Treatment Control Building : Fire Pump								
1	2345519-1	17 May 2023	Day time	1	755	-	300-400	Pass
1	2345519-2	17 May 2023	Night time	1	311	-	300-400	Pass
Spot - Water Treatment Control Building : Laboratory 1 (Fume Hood)								
2	2345519-3	17 May 2023	Day time	1	409	-	400-500	Pass
2	2345519-4	17 May 2023	Night time	1	449	-	400-500	Pass
Spot - Water Treatment Control Building : Laboratory 2 (Water Table)								
3	2345519-5	17 May 2023	Day time	1	503	-	400-500	Pass
3	2345519-6	17 May 2023	Night time	1	465	-	400-500	Pass
Spot - Water Treatment Control Building : Office Laboratory								
4	2345519-7	17 May 2023	Day time	1	403	-	400-500	Pass
4	2345519-8	17 May 2023	Night time	1	425	-	400-500	Pass
Spot - Water Treatment Control Building : Water Treatment								
5	2345519-9	17 May 2023	Day time	1	591	-	300-400	Pass
5	2345519-10	17 May 2023	Night time	1	649	-	300-400	Pass

Measurement by : Nonanon Tattongkham Personnel of ALS Laboratory Group (Thailand) Co., Ltd.
Guideline : Notification of Department of Labour Protection and Welfare, B.E.2568 (2017) dated November 27, B.E.2568 (2017), and published in the Royal Government Gazette, Vol.135, Part 39D dated February 21 B.E.2561 (2018)

Technical Management

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Wichan Choonharat
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Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasil, Phrak Daeng, Rayong Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2345520
Date Received : May 19, 2023
Date Reported : Jun 27, 2023
Report Number : 265752-1 C6

Page 1 of 3

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Spot	Illuminance (Lux)	Guideline Limit	Comment
Spot - Workshop and Warehouse : 2nd Floor : โรงงานชั้น 2								
1	2345520-1	17 May 2023	Day time	1	363	-	300-400	Pass
Spot - Workshop and Warehouse : 2nd Floor : โรงงาน ME 1								
4	2345520-2	17 May 2023	Day time	1	420	-	400-500	Pass
Spot - Workshop and Warehouse : 2nd Floor : โรงงาน ME 2								
5	2345520-3	17 May 2023	Day time	1	444	-	400-500	Pass
Spot - Workshop and Warehouse : 2nd Floor : โรงงาน ME 3								
6	2345520-4	17 May 2023	Day time	1	413	-	400-500	Pass
Spot - Workshop and Warehouse : 2nd Floor : โรงงาน ME 4								
7	2345520-5	17 May 2023	Day time	1	415	-	400-500	Pass
Spot - Workshop and Warehouse : 2nd Floor : โรงงาน MI 1								
8	2345520-6	17 May 2023	Day time	1	402	-	400-500	Pass
Spot - Workshop and Warehouse : 2nd Floor : โรงงาน MI 2								
9	2345520-7	17 May 2023	Day time	1	404	-	400-500	Pass
Spot - Workshop and Warehouse : 2nd Floor : โรงงาน MI 3								
10	2345520-8	17 May 2023	Day time	1	408	-	400-500	Pass
Spot - Workshop and Warehouse : 2nd Floor : โรงงาน MI 4								
11	2345520-9	17 May 2023	Day time	1	411	-	400-500	Pass
Spot - Workshop and Warehouse : 2nd Floor : โรงงาน MM 1								
12	2345520-10	17 May 2023	Day time	1	405	-	400-500	Pass
Spot - Workshop and Warehouse : 2nd Floor : โรงงาน MM 2								
13	2345520-11	17 May 2023	Day time	1	407	-	400-500	Pass
Spot - Workshop and Warehouse : 2nd Floor : โรงงาน MM 3								
14	2345520-12	17 May 2023	Day time	1	408	-	400-500	Pass
Spot - Workshop and Warehouse : 2nd Floor : โรงงาน MM 4								
15	2345520-13	17 May 2023	Day time	1	419	-	400-500	Pass
Spot - Workshop and Warehouse : 2nd Floor : โรงงาน MM Manager								
16	2345520-14	17 May 2023	Day time	1	445	-	400-500	Pass
Area - Workshop and Warehouse : 2nd Floor : โรงงาน ชั้น 2								
17.1	2345520-15	17 May 2023	Day time	1	396	346.0	50	100
17.2	2345520-16	17 May 2023	Day time	2	367			
17.3	2345520-17	17 May 2023	Day time	3	275			

Technical Management

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Wichan Choonharat
Assistant Manager

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Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phrak Daeng, Rayong Thailand 21140
P/O : GT54-421000514
Project Name : Monitoring EIA
Project Location : GT54

Lot ID: 2345520
Date Received : May 19, 2023
Date Reported : Jun 27, 2023
Report Number : 2657752-1 C6

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Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Spot	Illuminance (Lux) Average	Guideline Limit Spot/Min	Average	Comment
Area - Workshop and Warehouse : 2nd Floor : โรงงานชั้น 2									
18.1	2345520-18	17 May 2023	Day time	1	103	108.0	50	100	Pass
18.2	2345520-19	17 May 2023	Day time	2	113				
Area - Workshop and Warehouse : 2nd Floor : โรงงานชั้น 2									
19.1	2345520-20	17 May 2023	Day time	1	92	106.5	50	100	Pass
19.2	2345520-21	17 May 2023	Day time	2	121				
Area - Workshop and Warehouse : 2nd Floor : โรงงานชั้น 2									
20.1	2345520-22	17 May 2023	Day time	1	326	333.0	150	300	Pass
20.2	2345520-23	17 May 2023	Day time	2	340				
Area - Workshop and Warehouse : 2nd Floor : โรงงานชั้น 2									
21.1	2345520-24	17 May 2023	Day time	1	273	262.5	50	100	Pass
21.2	2345520-25	17 May 2023	Day time	2	252				
Area - Workshop and Warehouse : 2nd Floor : โรงงานชั้น 2									
22.1	2345520-26	17 May 2023	Day time	1	437	429.0	150	300	Pass
22.2	2345520-27	17 May 2023	Day time	2	481				
22.3	2345520-28	17 May 2023	Day time	3	462				
22.4	2345520-29	17 May 2023	Day time	4	411				
22.5	2345520-30	17 May 2023	Day time	5	361				
22.6	2345520-31	17 May 2023	Day time	6	422				
Area - Workshop and Warehouse : 2nd Floor : โรงงานชั้น W/H									
23.1	2345520-32	17 May 2023	Day time	1	511	428.5	25	50	Pass
23.2	2345520-33	17 May 2023	Day time	2	346				

Technical Management
Supt S
Supt Salameh
Section Head

Approved by
Wichan Choonharat
Assistant Manager

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13/06/2023



Analysis / Test Report

Client : Gulf TSA Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Phrak Daeng, Rayong Thailand 21140
P/O : GT54-421000514
Project Name : Monitoring EIA
Project Location : GT54

Lot ID: 2345520
Date Received : May 19, 2023
Date Reported : Jun 27, 2023
Report Number : 2657752-1 C6

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Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Spot	Illuminance (Lux) Average	Guideline Limit Spot/Min	Average	Comment
Area - Workshop and Warehouse : 2nd Floor : Store									
24.1	2345520-34	17 May 2023	Day time	1	210	736.3	50	100	Pass
24.2	2345520-35	17 May 2023	Day time	2	339				
24.3	2345520-36	17 May 2023	Day time	3	670				
24.4	2345520-37	17 May 2023	Day time	4	1,060				
24.5	2345520-38	17 May 2023	Day time	5	718				
24.6	2345520-39	17 May 2023	Day time	6	489				
24.7	2345520-40	17 May 2023	Day time	7	1,320				
24.8	2345520-41	17 May 2023	Day time	8	611				
24.9	2345520-42	17 May 2023	Day time	9	744				
24.10	2345520-43	17 May 2023	Day time	10	668				
24.11	2345520-44	17 May 2023	Day time	11	811				
24.12	2345520-45	17 May 2023	Day time	12	998				
24.13	2345520-46	17 May 2023	Day time	13	1,042				
24.14	2345520-47	17 May 2023	Day time	14	911				
24.15	2345520-48	17 May 2023	Day time	15	600				
24.16	2345520-49	17 May 2023	Day time	16	589				

Measurement by : Noranon Tattongkham 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
Supt S
Supt Salameh
Section Head

Approved by
Wichan Choonharat
Assistant Manager

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13/06/2023



Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong, Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2345521
Date Received : May 19, 2023
Date Reported : Jun 27, 2023
Report Number : 2657754-1 C6

Page 1 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)	Spot	Average	Spot/Min	Average	Comment
Area - Workshop and Warehouse : Ground Floor : Store 1-1										
1.1	2345521-1	17 May 2023	Day time	1	342	394.1	50	100	Pass	
1.2	2345521-2	17 May 2023	Day time	2	386					
1.3	2345521-3	17 May 2023	Day time	3	487					
1.4	2345521-4	17 May 2023	Day time	4	410					
1.5	2345521-5	17 May 2023	Day time	5	461					
1.6	2345521-6	17 May 2023	Day time	6	312					
1.7	2345521-7	17 May 2023	Day time	7	402					
1.8	2345521-8	17 May 2023	Day time	8	344					
1.9	2345521-9	17 May 2023	Day time	9	416					
1.10	2345521-10	17 May 2023	Day time	10	400					
1.11	2345521-11	17 May 2023	Day time	11	361					
1.12	2345521-12	17 May 2023	Day time	12	349					
1.13	2345521-13	17 May 2023	Day time	13	401					
1.14	2345521-14	17 May 2023	Day time	14	441					
1.15	2345521-15	17 May 2023	Day time	15	402					
1.16	2345521-16	17 May 2023	Day time	16	391					
Area - Workshop and Warehouse : Ground Floor : Warehouse W/H										
2.1	2345521-17	17 May 2023	Day time	1	721	610.0	50	100	Pass	
2.2	2345521-18	17 May 2023	Day time	2	499					
Area - Workshop and Warehouse : Ground Floor : Warehouse W/H 2nd										
3.1	2345521-19	17 May 2023	Day time	1	990	1,028	50	100	Pass	
3.2	2345521-20	17 May 2023	Day time	2	1,066					
Area - Workshop and Warehouse : Ground Floor : Warehouse 1										
4.1	2345521-21	17 May 2023	Day time	1	331	266.7	50	100	Pass	
4.2	2345521-22	17 May 2023	Day time	2	292					
4.3	2345521-23	17 May 2023	Day time	3	287					
4.4	2345521-24	17 May 2023	Day time	4	150					
4.5	2345521-25	17 May 2023	Day time	5	268					
4.6	2345521-26	17 May 2023	Day time	6	272					
Area - Workshop and Warehouse : Ground Floor : Warehouse 1-3										
5.1	2345521-27	17 May 2023	Day time	1	348	374.3	50	100	Pass	
5.2	2345521-28	17 May 2023	Day time	2	344					
5.3	2345521-29	17 May 2023	Day time	3	431					

Technical Management
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Analysis / Test Report

Client : Gulf T&S Co., Ltd.
225 Moo 3, WHA Eastern Seaboard Industrial Estate 1, Tasi, Pluak Daeng, Rayong, Thailand 21140
P/O : GTS4-4210500514
Project Name : Monitoring EIA
Project Location : GTS4

Lot ID: 2345521
Date Received : May 19, 2023
Date Reported : Jun 27, 2023
Report Number : 2657754-1 C6

Page 2 of 2

Lay out No.	Reference Number	Measurement Date	Measurement Time	Spot /Area No.	Illuminance (Lux)	Spot	Average	Spot/Min	Average	Comment
Spot - Workshop and Warehouse : Ground Floor : Warehouse W/H Office 1 TS3										
6	2345521-30	17 May 2023	Day time	1	406	-	400-500	-	Pass	
Spot - Workshop and Warehouse : Ground Floor : Warehouse W/H Office 2 TS4										
7	2345521-31	17 May 2023	Day time	1	439	-	400-500	-	Pass	
Spot - Workshop and Warehouse : Ground Floor : 1st Calibration Laboratory										
8	2345521-32	17 May 2023	Day time	1	404	-	400-500	-	Pass	
Area - Workshop and Warehouse : Ground Floor : Warehouse W/H Office 1-1										
9.1	2345521-33	17 May 2023	Day time	1	415	382.2	150	300	Pass	
9.2	2345521-34	17 May 2023	Day time	2	411					
9.3	2345521-35	17 May 2023	Day time	3	469					
9.4	2345521-36	17 May 2023	Day time	4	386					
9.5	2345521-37	17 May 2023	Day time	5	382					
9.6	2345521-38	17 May 2023	Day time	6	418					
9.7	2345521-39	17 May 2023	Day time	7	355					
9.8	2345521-40	17 May 2023	Day time	8	349					
9.9	2345521-41	17 May 2023	Day time	9	255					

Measurement by : Noranon Tathongkham 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)

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ภาคผนวก ค-10

แผนผังแสดงเส้นระดับเสียง (Noise Contour Map)



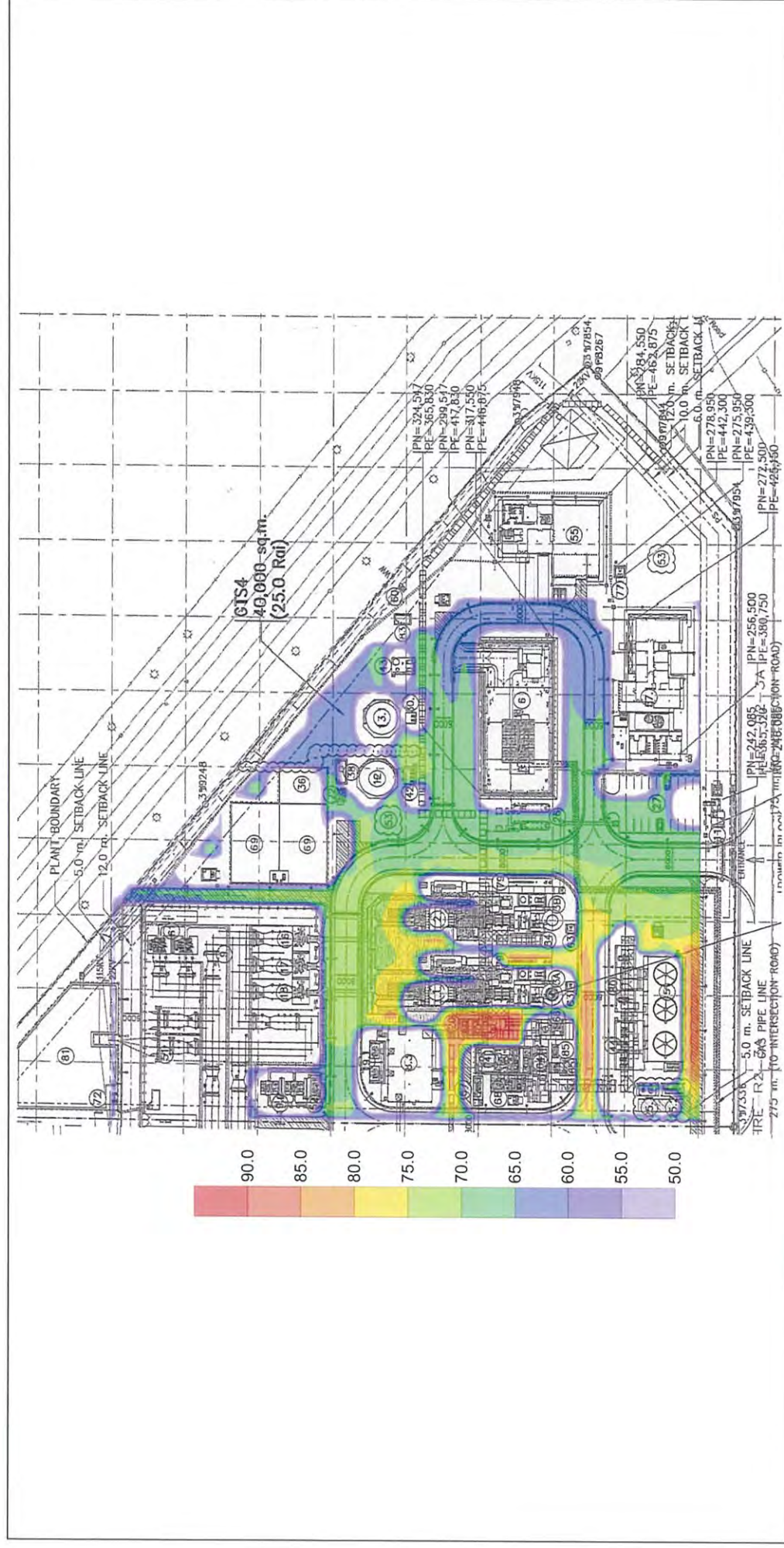
Noise Contour Map

Name Project : Gulf TS4 Co., Ltd.

Reference Number : Lot 20133934-1

บริเวณพื้นที่โรงไฟฟ้าตลิ่งชัน 4

Measurement Date : Aug 26, 2021



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