

ภาคผนวก ญ
ใบรายงานผลการวิเคราะห์



คุณภาพอากาศ



ANALYSIS REPORT

CUSTOMER NAME : PAN ORIENT ENERGY (SIAM) LIMITED
ADDRESS : 555 RASA TOWER II, 17TH FLOOR, UNIT 1702, PHAHOLYOTHIN ROAD, CHATUCHAK, BANGKOK 10900.
CONTACT INFORMATION : TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com
SAMPLING SOURCE : L53B-A1 : NONG KRANG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)
SAMPLE TYPE : AMBIENT
SAMPLING DATE : * , ** , ***
SAMPLING TIME : * , ** , ***
SAMPLING BY : MR SIRAPAT JONGPHADUNGKIET
ANALYZED BY : MISS JETJARIN TUMSA-AT

RECEIVED DATE : FEBRUARY 21, 2022
ANALYTICAL DATE : FEBRUARY 21-24, 2022
REPORT NO. : 2022-U013921
WORK NO. : 2022-000520
ANALYSIS NO. : T22AD066-0001 - T22AD066-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		
			L53B-A1 : NONG KRANG CHURCH		
			* T22AD066-0001	** T22AD066-0002	*** T22AD066-0003
TOTAL SUSPENDED PARTICULATE	mg/m ³	GRAVIMETRIC (HIGH VOLUME METHOD)	0.067	0.045	0.034
PARTICULATE MATTER (≤ 10 μm)	mg/m ³	GRAVIMETRIC (HIGH VOLUME METHOD)	0.030	0.032	0.020
SAMPLE CONDITION			COMPLETE	COMPLETE	COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.
TSP : US EPA, CODE OF FEDERAL REGULATION SEARCH RESULTS, 40 CFR-CHAPTER I PART 50, APPENDIX B.
PM10 : US EPA, CODE OF FEDERAL REGULATION SEARCH RESULTS, 40 CFR-CHAPTER I PART 50, APPENDIX J.
***** : SAMPLING FROM 08:00 HOUR ON FEBRUARY 16, 2022 TO 08:00 HOUR ON FEBRUARY 17, 2022.
****** : SAMPLING FROM 08:00 HOUR ON FEBRUARY 17, 2022 TO 08:00 HOUR ON FEBRUARY 18, 2022.
******* : SAMPLING FROM 08:00 HOUR ON FEBRUARY 18, 2022 TO 08:00 HOUR ON FEBRUARY 19, 2022.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 2, 2022



ANALYSIS REPORT

CUSTOMER NAME : PAN ORIENT ENERGY (SIAM) LIMITED
ADDRESS : 555 RASA TOWER II, 17TH FLOOR, UNIT 1702, PHAHOLYOTHIN ROAD, CHATUCHAK, BANGKOK 10900.
CONTACT INFORMATION : TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com
SAMPLING SOURCE : L53B-A2 : MOO 4, THUNG LUK NOK SUB DISTRICT (UTM WGS 84 ZONE 47P 597868E 1554953N)
SAMPLE TYPE : AMBIENT
SAMPLING DATE : * , ** , ***
SAMPLING TIME : * , ** , ***
SAMPLING BY : MR SIRAPAT JONGPHADUNGKIET
ANALYZED BY : MISS JETJARIN TUMSA-AT

RECEIVED DATE : FEBRUARY 21, 2022
ANALYTICAL DATE : FEBRUARY 21-24, 2022
REPORT NO. : 2022-U013922
WORK NO. : 2022-000520
ANALYSIS NO. : T22AD066-0004 - T22AD066-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		
			L53B-A2 : MOO 4, THUNG LUK NOK SUB DISTRICT		
			*	**	***
			T22AD066-0004	T22AD066-0005	T22AD066-0006
TOTAL SUSPENDED PARTICULATE	mg/m ³	GRAVIMETRIC (HIGH VOLUME METHOD)	0.086	0.055	0.033
PARTICULATE MATTER (≤ 10 μm)	mg/m ³	GRAVIMETRIC (HIGH VOLUME METHOD)	0.030	0.031	0.018
SAMPLE CONDITION			COMPLETE	COMPLETE	COMPLETE

REMARK

RESULT : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.
TSP : US EPA, CODE OF FEDERAL REGULATION SEARCH RESULTS, 40 CFR-CHAPTER I PART 50, APPENDIX B.
PM10 : US EPA, CODE OF FEDERAL REGULATION SEARCH RESULTS, 40 CFR-CHAPTER I PART 50, APPENDIX J.
***** : SAMPLING FROM 08:30 HOUR ON FEBRUARY 16, 2022 TO 08:30 HOUR ON FEBRUARY 17, 2022.
****** : SAMPLING FROM 08:30 HOUR ON FEBRUARY 17, 2022 TO 08:30 HOUR ON FEBRUARY 18, 2022.
******* : SAMPLING FROM 08:30 HOUR ON FEBRUARY 18, 2022 TO 08:30 HOUR ON FEBRUARY 19, 2022.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MARCH 2, 2022



ANALYSIS REPORT

CUSTOMER NAME : PAN ORIENT ENERGY (SIAM) LIMITED
ADDRESS : 555 RASA TOWER II 17TH FLOOR UNIT 1702 PHAHONYOTHIN ROAD, CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com
MEASURING PLACE : L53B-A1 : NONG KONG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)
MEASURING TYPE : AMBIENT (AIR) **RECEIVED DATE** : FEBRUARY 16-19, 2022
MEASURING DATE : FEBRUARY 16-19, 2022 **ANALYTICAL DATE** : FEBRUARY 16-19, 2022
MEASURING TIME : * **REPORT NO.** : 2022-U015146
MEASURING METHOD : CHEMILUMINESCENCE **WORK NO.** : 2022-000520
MEASURED BY : MR SIRAPAT JONGPHADUNGKIET **ANALYSIS NO.** : T22AD066-0001 - T22AD066-0003

TIME *	RESULT (ppm)		
	NITROGEN DIOXIDE		
	L53B-A1 : NONG KONG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)		
	FEBRUARY 16 - 17, 2022 T22AD066-0001	FEBRUARY 17 - 18, 2022 T22AD066-0002	FEBRUARY 18 - 19, 2022 T22AD066-0003
07:00-08:00 HOUR	0.0050	0.0055	0.0054
08:00-09:00 HOUR	0.0051	0.0074	0.0067
09:00-10:00 HOUR	0.0055	0.0069	0.0065
10:00-11:00 HOUR	0.0058	0.0062	0.0062
11:00-12:00 HOUR	0.0060	0.0061	0.0059
12:00-13:00 HOUR	0.0061	0.0066	0.0061
13:00-14:00 HOUR	0.0063	0.0046	0.0061
14:00-15:00 HOUR	0.0062	0.0052	0.0072
15:00-16:00 HOUR	0.0060	0.0054	0.0053
16:00-17:00 HOUR	0.0050	0.0057	0.0055
17:00-18:00 HOUR	0.0048	0.0059	0.0068
18:00-19:00 HOUR	0.0043	0.0038	0.0037
19:00-20:00 HOUR	0.0039	0.0048	0.0049
20:00-21:00 HOUR	0.0042	0.0044	0.0053
21:00-22:00 HOUR	0.0041	0.0055	0.0043
22:00-23:00 HOUR	0.0037	0.0044	0.0047
23:00-00:00 HOUR	0.0045	0.0063	0.0047
00:00-01:00 HOUR	0.0049	0.0046	0.0043
01:00-02:00 HOUR	0.0044	0.0047	0.0053
02:00-03:00 HOUR	0.0037	0.0044	0.0065
03:00-04:00 HOUR	0.0039	0.0047	0.0043
04:00-05:00 HOUR	0.0040	0.0046	0.0053
05:00-06:00 HOUR	0.0043	0.0049	0.0038
06:00-07:00 HOUR	0.0044	0.0051	0.0045


 (MR SILA BANJONGJAIKUK)
 LABORATORY SUPERVISOR

MARCH 6, 2022



ANALYSIS REPORT

CUSTOMER NAME : PAN ORIENT ENERGY (SIAM) LIMITED
ADDRESS : 555 RASA TOWER II 17TH FLOOR UNIT 1702 PHAHONYOTHIN ROAD, CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com
MEASURING PLACE : L53B-A1 : NONG KONG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)
MEASURING TYPE : AMBIENT (AIR) **RECEIVED DATE** : FEBRUARY 16-19, 2022
MEASURING DATE : FEBRUARY 16-19, 2022 **ANALYTICAL DATE** : FEBRUARY 16-19, 2022
MEASURING TIME : * **REPORT NO.** : 2022-U015149
MEASURING METHOD : UV FLUORESCENCE **WORK NO.** : 2022-000520
MEASURED BY : MR SIRAPAT JONGPHADUNGKIET **ANALYSIS NO.** : T22AD066-0001 - T22AD066-0003

TIME *	RESULT (ppm)		
	SULPHUR DIOXIDE		
	L53B-A1 : NONG KONG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)		
	FEBRUARY 16 - 17, 2022 T22AD066-0001	FEBRUARY 17 - 18, 2022 T22AD066-0002	FEBRUARY 18 - 19, 2022 T22AD066-0003
07:00-08:00 HOUR	0.0022	0.0018	0.0019
08:00-09:00 HOUR	0.0022	0.0019	0.0019
09:00-10:00 HOUR	0.0019	0.0020	0.0020
10:00-11:00 HOUR	0.0021	0.0021	0.0019
11:00-12:00 HOUR	0.0019	0.0019	0.0021
12:00-13:00 HOUR	0.0020	0.0020	0.0020
13:00-14:00 HOUR	0.0019	0.0022	0.0019
14:00-15:00 HOUR	0.0022	0.0020	0.0019
15:00-16:00 HOUR	0.0022	0.0021	0.0019
16:00-17:00 HOUR	0.0020	0.0021	0.0019
17:00-18:00 HOUR	0.0020	0.0022	0.0019
18:00-19:00 HOUR	0.0020	0.0020	0.0020
19:00-20:00 HOUR	0.0021	0.0019	0.0019
20:00-21:00 HOUR	0.0019	0.0022	0.0017
21:00-22:00 HOUR	0.0019	0.0019	0.0016
22:00-23:00 HOUR	0.0016	0.0016	0.0016
23:00-00:00 HOUR	0.0016	0.0017	0.0015
00:00-01:00 HOUR	0.0017	0.0018	0.0016
01:00-02:00 HOUR	0.0017	0.0018	0.0016
02:00-03:00 HOUR	0.0017	0.0015	0.0017
03:00-04:00 HOUR	0.0016	0.0017	0.0017
04:00-05:00 HOUR	0.0015	0.0016	0.0017
05:00-06:00 HOUR	0.0015	0.0017	0.0019
06:00-07:00 HOUR	0.0018	0.0018	0.0021
AVERAGE 24 HOUR	0.0019	0.0019	0.0018



(MR SILA BANJONGJAIRUK)
LABORATORY SUPERVISOR

MARCH 6, 2022



ANALYSIS REPORT

CUSTOMER NAME : PAN ORIENT ENERGY (SIAM) LIMITED
ADDRESS : 555 RASA TOWER II 17TH FLOOR UNIT 1702 PHAHONYOTHIN ROAD, CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com
MEASURING PLACE : L53B-A1 : NONG KONG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)
MEASURING TYPE : AMBIENT (AIR) **RECEIVED DATE** : FEBRUARY 16-19, 2022
MEASURING DATE : FEBRUARY 16-19, 2022 **ANALYTICAL DATE** : FEBRUARY 16-19, 2022
MEASURING TIME : * **REPORT NO.** : 2022-U015150
MEASURING METHOD : WIND SPEED & WIND DIRECTION EQUIPMENT **WORK NO.** : 2022-000520
MEASURED BY : MR SIRAPAT JONGPHADUNGKIET **ANALYSIS NO.** : T22AD066-0001 - T22AD066-0003

TIME *	RESULT (m/s)					
	L53B-A1 : NONG KONG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)					
	FEBRUARY 16 - 17, 2022 T22AD066-0001		FEBRUARY 17 - 18, 2022 T22AD066-0002		FEBRUARY 18 - 19, 2022 T22AD066-0003	
	WIND SPEED	WIND DIRECTION	WIND SPEED	WIND DIRECTION	WIND SPEED	WIND DIRECTION
07:00-08:00 HOUR	0.5	N	1.8	S	2.2	SSE
08:00-09:00 HOUR	0.3	W	2.2	S	2.4	SSE
09:00-10:00 HOUR	0.5	NW	1.2	SSE	1.5	SE
10:00-11:00 HOUR	0.4	W	1.9	SSE	1.3	SSE
11:00-12:00 HOUR	0.7	NNW	1.1	SSE	1.7	SSE
12:00-13:00 HOUR	0.6	W	2.3	SE	0.9	ESE
13:00-14:00 HOUR	1.3	WSW	2.4	SE	0.4	SE
14:00-15:00 HOUR	2.7	W	1.1	SE	1.1	SSE
15:00-16:00 HOUR	2.0	WSW	1.5	SSE	1.5	SE
16:00-17:00 HOUR	2.5	WSW	2.8	SE	1.2	SSE
17:00-18:00 HOUR	1.0	WSW	2.5	S	1.4	SE
18:00-19:00 HOUR	2.7	W	2.5	S	1.3	SE
19:00-20:00 HOUR	2.8	WSW	2.4	SSE	1.2	SSE
20:00-21:00 HOUR	1.9	WNW	1.2	S	1.8	S
21:00-22:00 HOUR	2.7	NW	3.2	S	2.4	S
22:00-23:00 HOUR	2.1	SSW	2.9	SSE	2.3	S
23:00-00:00 HOUR	0.3	WNW	1.8	SSE	2.7	SSE
00:00-01:00 HOUR	1.7	SSW	1.0	S	0.9	SE
01:00-02:00 HOUR	3.4	SW	1.6	SSE	1.0	SE
02:00-03:00 HOUR	3.2	WNW	2.7	SE	1.5	SE
03:00-04:00 HOUR	2.9	SW	3.1	SE	1.3	SSE
04:00-05:00 HOUR	2.6	SW	2.7	SE	0.5	SE
05:00-06:00 HOUR	2.3	SSW	3.2	SE	0.9	SE
06:00-07:00 HOUR	2.5	SSW	2.6	SSE	2.1	ESE



(MR SILA BANJONGJAIKUK)
LABORATORY SUPERVISOR

MARCH 6, 2022



ANALYSIS REPORT

CUSTOMER NAME : PAN ORIENT ENERGY (SIAM) LIMITED
ADDRESS : 555 RASA TOWER II 17TH FLOOR UNIT 1702 PHAHONYOTHIN ROAD, CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com
MEASURING PLACE : L53B-A2 : MOO 4 THUNG LUK NOK SUB DISTRICT (UTM WGS 84 ZONE 47P 597868E 1554953N)
MEASURING TYPE : AMBIENT (AIR) **RECEIVED DATE** : FEBRUARY 16-19, 2022
MEASURING DATE : FEBRUARY 16-19, 2022 **ANALYTICAL DATE** : FEBRUARY 16-19, 2022
MEASURING TIME : * **REPORT NO.** : 2022-U015151
MEASURING METHOD : CHEMILUMINESCENCE **WORK NO.** : 2022-000520
MEASURED BY : MR SIRAPAT JONGPHADUNGKIET **ANALYSIS NO.** : T22AD066-0004 - T22AD066-0006

TIME *	RESULT (ppm)		
	NITROGEN DIOXIDE		
	L53B-A2 : MOO 4 THUNG LUK NOK SUB DISTRICT (UTM WGS 84 ZONE 47P 597868E 1554953N)		
	FEBRUARY 16 - 17, 2022 T22AD066-0004	FEBRUARY 17 - 18, 2022 T22AD066-0005	FEBRUARY 18 - 19, 2022 T22AD066-0006
07:00-08:00 HOUR	0.0057	0.0087	0.0081
08:00-09:00 HOUR	0.0060	0.0070	0.0066
09:00-10:00 HOUR	0.0059	0.0090	0.0075
10:00-11:00 HOUR	0.0065	0.0073	0.0067
11:00-12:00 HOUR	0.0061	0.0077	0.0060
12:00-13:00 HOUR	0.0049	0.0069	0.0056
13:00-14:00 HOUR	0.0061	0.0074	0.0068
14:00-15:00 HOUR	0.0075	0.0090	0.0078
15:00-16:00 HOUR	0.0082	0.0070	0.0072
16:00-17:00 HOUR	0.0082	0.0058	0.0085
17:00-18:00 HOUR	0.0076	0.0060	0.0076
18:00-19:00 HOUR	0.0070	0.0064	0.0086
19:00-20:00 HOUR	0.0073	0.0046	0.0071
20:00-21:00 HOUR	0.0076	0.0064	0.0074
21:00-22:00 HOUR	0.0080	0.0048	0.0075
22:00-23:00 HOUR	0.0056	0.0060	0.0057
23:00-00:00 HOUR	0.0040	0.0053	0.0067
00:00-01:00 HOUR	0.0052	0.0055	0.0072
01:00-02:00 HOUR	0.0047	0.0054	0.0060
02:00-03:00 HOUR	0.0048	0.0053	0.0058
03:00-04:00 HOUR	0.0067	0.0050	0.0060
04:00-05:00 HOUR	0.0048	0.0051	0.0054
05:00-06:00 HOUR	0.0064	0.0067	0.0065
06:00-07:00 HOUR	0.0070	0.0071	0.0073



(MR SILA BANJONGJAIKUK)
LABORATORY SUPERVISOR

MARCH 6, 2022



ANALYSIS REPORT

CUSTOMER NAME : PAN ORIENT ENERGY (SIAM) LIMITED
ADDRESS : 555 RASA TOWER II 17TH FLOOR UNIT 1702 PHAHONYOTHIN ROAD, CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 2937 1138-40 e-mail : prakairpruek@poesiam.com
MEASURING PLACE : L53B-A2 : MOO 4 THUNG LUK NOK SUB DISTRICT (UTM WGS 84 ZONE 47P 597868E 1554953N)
MEASURING TYPE : AMBIENT (AIR) **RECEIVED DATE** : FEBRUARY 16-19, 2022
MEASURING DATE : FEBRUARY 16-19, 2022 **ANALYTICAL DATE** : FEBRUARY 16-19, 2022
MEASURING TIME : * **REPORT NO.** : 2022-U015152
MEASURING METHOD : UV FLUORESCENCE **WORK NO.** : 2022-000520
MEASURED BY : MR SIRAPAT JONGPHADUNGKIET **ANALYSIS NO.** : T22AD066-0004 - T22AD066-0006

TIME *	RESULT (ppm)		
	SULPHUR DIOXIDE		
	L53B-A2 : MOO 4 THUNG LUK NOK SUB DISTRICT (UTM WGS 84 ZONE 47P 597868E 1554953N)		
	FEBRUARY 16 - 17, 2022 T22AD066-0004	FEBRUARY 17 - 18, 2022 T22AD066-0005	FEBRUARY 18 - 19, 2022 T22AD066-0006
07:00-08:00 HOUR	0.0020	0.0017	0.0017
08:00-09:00 HOUR	0.0021	0.0018	0.0017
09:00-10:00 HOUR	0.0021	0.0018	0.0018
10:00-11:00 HOUR	0.0021	0.0019	0.0017
11:00-12:00 HOUR	0.0020	0.0019	0.0017
12:00-13:00 HOUR	0.0020	0.0019	0.0019
13:00-14:00 HOUR	0.0021	0.0018	0.0020
14:00-15:00 HOUR	0.0020	0.0020	0.0021
15:00-16:00 HOUR	0.0021	0.0019	0.0021
16:00-17:00 HOUR	0.0021	0.0018	0.0021
17:00-18:00 HOUR	0.0020	0.0020	0.0019
18:00-19:00 HOUR	0.0019	0.0019	0.0020
19:00-20:00 HOUR	0.0021	0.0018	0.0017
20:00-21:00 HOUR	0.0021	0.0018	0.0017
21:00-22:00 HOUR	0.0019	0.0017	0.0017
22:00-23:00 HOUR	0.0018	0.0016	0.0016
23:00-00:00 HOUR	0.0017	0.0015	0.0016
00:00-01:00 HOUR	0.0018	0.0014	0.0017
01:00-02:00 HOUR	0.0017	0.0015	0.0015
02:00-03:00 HOUR	0.0017	0.0016	0.0015
03:00-04:00 HOUR	0.0017	0.0016	0.0017
04:00-05:00 HOUR	0.0016	0.0017	0.0017
05:00-06:00 HOUR	0.0017	0.0017	0.0017
06:00-07:00 HOUR	0.0015	0.0017	0.0018
AVERAGE 24 HOUR	0.0019	0.0018	0.0018



(MR SILA BANJONGJAIKUK)
LABORATORY SUPERVISOR

MARCH 6, 2022



ANALYSIS REPORT

CUSTOMER NAME : PAN ORIENT ENERGY (SIAM) LIMITED
ADDRESS : 555 RASA TOWER II 17TH FLOOR UNIT 1702 PHAHONYOTHIN ROAD, CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com
MEASURING PLACE : L53B-A2 : MOO 4 THUNG LUK NOK SUB DISTRICT (UTM WGS 84 ZONE 47P 597868E 1554953N)
MEASURING TYPE : AMBIENT (AIR) **RECEIVED DATE** : FEBRUARY 16-19, 2022
MEASURING DATE : FEBRUARY 16-19, 2022 **ANALYTICAL DATE** : FEBRUARY 16-19, 2022
MEASURING TIME : * **REPORT NO.** : 2022-U015153
MEASURING METHOD : WIND SPEED & WIND DIRECTION EQUIPMENT **WORK NO.** : 2022-000520
MEASURED BY : MR SIRAPAT JONGPHADUNGKIET **ANALYSIS NO.** : T22AD066-0004 - T22AD066-0006

TIME *	RESULT (m/s)					
	L53B-A2 : MOO 4 THUNG LUK NOK SUB DISTRICT (UTM WGS 84 ZONE 47P 597868E 1554953N)					
	FEBRUARY 16 - 17, 2022 T22AD066-0004		FEBRUARY 17 - 18, 2022 T22AD066-0005		FEBRUARY 18 - 19, 2022 T22AD066-0006	
	WIND SPEED	WIND DIRECTION	WIND SPEED	WIND DIRECTION	WIND SPEED	WIND DIRECTION
07:00-08:00 HOUR	0.5	NW	2.9	SE	1.8	S
08:00-09:00 HOUR	0.9	WNW	2.7	SE	1.5	S
09:00-10:00 HOUR	1.0	WNW	2.4	SE	2.1	S
10:00-11:00 HOUR	1.4	WNW	1.7	S	2.2	S
11:00-12:00 HOUR	2.1	WSW	1.5	S	2.5	SE
12:00-13:00 HOUR	2.6	W	1.7	SSE	2.6	S
13:00-14:00 HOUR	3.3	W	2.1	SE	2.5	SSE
14:00-15:00 HOUR	3.1	NW	0.5	SE	0.8	S
15:00-16:00 HOUR	3.4	NNW	0.9	SE	1.0	S
16:00-17:00 HOUR	2.8	NW	1.6	SSE	0.5	SE
17:00-18:00 HOUR	2.3	WSW	1.8	SSE	1.4	SSE
18:00-19:00 HOUR	1.7	NNW	1.2	S	2.1	SSE
19:00-20:00 HOUR	2.0	NNW	2.8	SE	2.3	SE
20:00-21:00 HOUR	2.2	W	1.4	S	1.5	SE
21:00-22:00 HOUR	1.8	WSW	2.8	SE	0.9	SSE
22:00-23:00 HOUR	1.4	SW	1.2	SSE	0.4	SE
23:00-00:00 HOUR	0.6	SSW	2.7	ESE	0.7	S
00:00-01:00 HOUR	0.4	SSW	0.8	S	1.1	S
01:00-02:00 HOUR	2.2	S	0.4	SSE	1.2	S
02:00-03:00 HOUR	2.6	S	0.9	SE	0.6	SE
03:00-04:00 HOUR	1.4	S	1.1	SE	0.5	SSE
04:00-05:00 HOUR	0.9	SSE	2.1	SE	1.3	S
05:00-06:00 HOUR	2.6	SE	2.2	SE	1.5	SSE
06:00-07:00 HOUR	3.3	SSE	2.0	S	1.8	SSE



(MR SILA BANJONGJAIKUK)
LABORATORY SUPERVISOR

MARCH 6, 2022



ระดับเสียง



ANALYSIS REPORT

CUSTOMER NAME	: PAN ORIENT ENERGY (SIAM) LIMITED	RECEIVED DATE	: FEBRUARY 16-19, 2022
ADDRESS	: 555 RASA TOWER II 17TH FLOOR UNIT 1702 PHAHONYOTHIN ROAD, CHATUCHAK CHATUCHAK BANGKOK 10900	ANALYTICAL DATE	: FEBRUARY 16-19, 2022
CONTACT INFORMATION	: TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com	REPORT NO.	: 2022-U015158
MEASURING SOURCE	: L53B-N1 : NONG KRANG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)	WORK NO.	: 2022-000520
MEASURING TYPE	: AMBIENT (NOISE)	ANALYSIS NO.	: T22AD068-0001 - T22AD068-0003
MEASURING DATE	: FEBRUARY 16-19, 2022		
MEASURING TIME	: *		
MEASURING METHOD	: INTEGRATED SOUND LEVEL METER		
MEASURED BY	: MR SIRAPAT JONGPHADUNGKIET		

TIME*	RESULT dB(A)		
	L53B-N1 : NONG KRANG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)		
	FEBRUARY 16 - 17, 2022		
	T22AD068-0001		
	L _{Aeq} 1 hour	L _{Amax} 1 hour	L _{A90} 1 hour
07:00-08:00 HOUR	50.4	69.8	44.4
08:00-09:00 HOUR	51.6	76.1	42.9
09:00-10:00 HOUR	50.7	76.6	43.5
10:00-11:00 HOUR	48.9	70.8	41.1
11:00-12:00 HOUR	45.3	62.9	40.4
12:00-13:00 HOUR	46.4	69.5	40.1
13:00-14:00 HOUR	46.4	67.1	38.7
14:00-15:00 HOUR	49.3	71.5	36.7
15:00-16:00 HOUR	48.8	67.8	40.7
16:00-17:00 HOUR	47.3	67.2	39.4
17:00-18:00 HOUR	49.9	71.4	43.7
18:00-19:00 HOUR	47.8	75.4	36.7
19:00-20:00 HOUR	46.8	71.7	35.5
20:00-21:00 HOUR	48.4	68.1	39.7
21:00-22:00 HOUR	45.0	64.0	33.0
22:00-23:00 HOUR	37.1	56.8	33.1
23:00-00:00 HOUR	34.9	60.7	32.6
00:00-01:00 HOUR	35.3	53.2	32.6
01:00-02:00 HOUR	36.1	61.8	33.2
02:00-03:00 HOUR	36.8	60.5	33.6
03:00-04:00 HOUR	35.7	49.7	33.0
04:00-05:00 HOUR	37.7	61.1	34.6
05:00-06:00 HOUR	38.1	60.4	35.0
06:00-07:00 HOUR	47.5	70.6	37.7
L _{Aeq} 24 hours		46.9	
L _{Adn}		49.3	



TIME*	RESULT dB(A)		
	L53B-N1 : NONG KRANG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)		
	FEBRUARY 17 - 18, 2022		
	T22AD068-0002		
	L _{Aeq} 1 hour	L _{Amax} 1 hour	L _{A90} 1 hour
07:00-08:00 HOUR	50.8	76.4	44.7
08:00-09:00 HOUR	48.1	71.5	39.4
09:00-10:00 HOUR	48.9	67.8	41.0
10:00-11:00 HOUR	46.8	66.1	38.0
11:00-12:00 HOUR	47.1	74.4	36.5
12:00-13:00 HOUR	45.9	74.1	38.7
13:00-14:00 HOUR	44.2	61.3	38.6
14:00-15:00 HOUR	44.8	67.1	38.1
15:00-16:00 HOUR	44.9	66.7	38.5
16:00-17:00 HOUR	47.3	68.1	41.1
17:00-18:00 HOUR	50.9	76.1	45.7
18:00-19:00 HOUR	47.3	67.5	40.2
19:00-20:00 HOUR	44.3	69.7	38.7
20:00-21:00 HOUR	44.5	66.9	38.8
21:00-22:00 HOUR	44.0	63.9	38.5
22:00-23:00 HOUR	38.9	50.5	37.6
23:00-00:00 HOUR	39.4	66.7	37.8
00:00-01:00 HOUR	39.6	56.1	37.6
01:00-02:00 HOUR	39.3	65.3	37.7
02:00-03:00 HOUR	38.7	53.1	37.5
03:00-04:00 HOUR	38.8	66.8	37.3
04:00-05:00 HOUR	38.7	57.6	37.1
05:00-06:00 HOUR	41.5	67.0	38.0
06:00-07:00 HOUR	49.4	79.0	42.3
L _{Aeq} 24 hours		46.0	
L _{Adn}		50.0	

TIME*	RESULT dB(A)		
	L53B-N1 : NONG KRANG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)		
	FEBRUARY 18 - 19, 2022		
	T22AD068-0003		
	L _{Aeq} 1 hour	L _{Amax} 1 hour	L _{A90} 1 hour
07:00-08:00 HOUR	49.2	69.7	44.6
08:00-09:00 HOUR	49.7	73.1	42.1
09:00-10:00 HOUR	51.0	69.5	41.0
10:00-11:00 HOUR	49.4	69.9	40.4
11:00-12:00 HOUR	50.1	73.2	40.5
12:00-13:00 HOUR	47.5	69.7	39.5
13:00-14:00 HOUR	50.5	73.6	40.0
14:00-15:00 HOUR	51.2	82.1	44.7
15:00-16:00 HOUR	48.7	68.1	42.0
16:00-17:00 HOUR	48.8	72.1	42.1
17:00-18:00 HOUR	48.1	69.0	43.5
18:00-19:00 HOUR	47.2	68.2	40.7
19:00-20:00 HOUR	45.4	69.9	42.2
20:00-21:00 HOUR	45.0	62.7	41.7
21:00-22:00 HOUR	47.5	69.0	41.4
22:00-23:00 HOUR	43.4	54.1	42.1
23:00-00:00 HOUR	42.9	55.1	41.5
00:00-01:00 HOUR	44.2	52.8	42.8
01:00-02:00 HOUR	44.4	80.7	42.7
02:00-03:00 HOUR	43.3	65.5	41.4
03:00-04:00 HOUR	42.0	54.1	40.5
04:00-05:00 HOUR	43.1	66.4	40.8
05:00-06:00 HOUR	43.8	61.6	41.2
06:00-07:00 HOUR	49.6	72.3	43.0
L _{Aeq} 24 hours		47.8	
L _{Adn}		52.1	

Sila Banjongjairuk

(MR SILA BANJONGJAIRUK)
LABORATORY SUPERVISOR

MARCH 6, 2022

ANALYSIS REPORT

CUSTOMER NAME : PAN ORIENT ENERGY (SIAM) LIMITED
ADDRESS : 555 RASA TOWER II 17TH FLOOR UNIT 1702 PHAHONYOTHIN ROAD, CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com
MEASURING PLACE : L53B-N1 : NONG KRANG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)
MEASURING TYPE : AMBIENT (ANNOYANCE NOISE)
MEASURING DATE : FEBRUARY 16-19, 2022
MEASURING TIME : *
MEASURING EQUIPMENT : INTEGRATED SOUND LEVEL METER AND CALCULATION
MEASURED BY : MR SIRAPAT JONGPHADUNGKIET

RECEIVED DATE : FEBRUARY 16-19, 2022
ANALYTICAL DATE : FEBRUARY 16-19, 2022
REPORT NO. : 2022-U015157
WORK NO. : 2022-000520
ANALYSIS NO. : T22AD068-0001 - T22AD068-0003

DATE	TIME*	RESULT (dB(A))				
		L53B-N1 : NONG KRANG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)				
		SPECIFIC NOISE LEVEL	RESIDUAL NOISE LEVEL	SPECIFIC NOISE LEVEL (IMPROVE NOISE LEVEL)	BACKGROUND NOISE LEVEL	ANNOYANCE NOISE LEVEL
FEBRUARY 16, 2022	DAY TIME ^{1/}					
T22AD068-0001	07:00-08:00 HOUR	50.4 ^{1/}	45.0 **	48.9 ^{1/}	42.1 **	6.8
	08:00-09:00 HOUR	51.6 ^{1/}	45.0 **	50.6 ^{1/}	42.1 **	8.5
	09:00-10:00 HOUR	50.7 ^{1/}	45.0 **	49.2 ^{1/}	42.1 **	7.1
	10:00-11:00 HOUR	48.9 ^{1/}	45.0 **	46.9 ^{1/}	42.1 **	4.8
	11:00-12:00 HOUR	45.3 ^{1/}	45.0 **	38.3 ^{1/}	42.1 **	NOT SIGNIFICANT ^{3/}
	12:00-13:00 HOUR	46.4 ^{1/}	45.0 **	39.4 ^{1/}	42.1 **	NOT SIGNIFICANT ^{3/}
	13:00-14:00 HOUR	46.4 ^{1/}	45.0 **	39.4 ^{1/}	42.1 **	NOT SIGNIFICANT ^{3/}
	14:00-15:00 HOUR	49.3 ^{1/}	45.0 **	47.3 ^{1/}	42.1 **	5.2
	15:00-16:00 HOUR	48.8 ^{1/}	45.0 **	46.8 ^{1/}	42.1 **	4.7
	16:00-17:00 HOUR	47.3 ^{1/}	45.0 **	42.8 ^{1/}	42.1 **	0.7
	17:00-18:00 HOUR	49.9 ^{1/}	45.0 **	48.4 ^{1/}	42.1 **	6.3
	18:00-19:00 HOUR	47.8 ^{1/}	45.0 **	44.8 ^{1/}	42.1 **	2.7
	19:00-20:00 HOUR	46.8 ^{1/}	45.0 **	42.3 ^{1/}	42.1 **	0.2
	20:00-21:00 HOUR	48.4 ^{1/}	45.0 **	45.4 ^{1/}	42.1 **	3.3
	21:00-22:00 HOUR	45.0 ^{1/}	45.0 **	38.0 ^{1/}	42.1 **	NOT SIGNIFICANT ^{3/}
	NIGHT TIME ^{2/}					
	22:00-22:05 HOUR	35.3 ^{2/}	35.1 ***	31.3 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	22:05-22:10 HOUR	35.7 ^{2/}	35.1 ***	31.7 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	22:10-22:15 HOUR	35.5 ^{2/}	35.1 ***	31.5 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	22:15-22:20 HOUR	35.2 ^{2/}	35.1 ***	31.2 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	22:20-22:25 HOUR	36.8 ^{2/}	35.1 ***	35.3 ^{2/}	33.8 ***	1.5
	22:25-22:30 HOUR	39.2 ^{2/}	35.1 ***	40.2 ^{2/}	33.8 ***	6.4
	22:30-22:35 HOUR	38.2 ^{2/}	35.1 ***	38.2 ^{2/}	33.8 ***	4.4
	22:35-22:40 HOUR	37.0 ^{2/}	35.1 ***	35.5 ^{2/}	33.8 ***	1.7
	22:40-22:45 HOUR	40.5 ^{2/}	35.1 ***	42.0 ^{2/}	33.8 ***	8.2
	22:45-22:50 HOUR	35.5 ^{2/}	35.1 ***	31.5 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	22:50-22:55 HOUR	35.2 ^{2/}	35.1 ***	31.2 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	22:55-23:00 HOUR	36.3 ^{2/}	35.1 ***	32.3 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	23:00-23:05 HOUR	36.1 ^{2/}	35.1 ***	32.1 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	23:05-23:10 HOUR	33.9 ^{2/}	35.1 ***	29.9 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	23:10-23:15 HOUR	32.4 ^{2/}	35.1 ***	28.4 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	23:15-23:20 HOUR	33.3 ^{2/}	35.1 ***	29.3 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	23:20-23:25 HOUR	36.7 ^{2/}	35.1 ***	35.2 ^{2/}	33.8 ***	1.4



DATE	TIME*	RESULT (dB(A))				
		L53B-N1 : NONG KRANG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)				
		SPECIFIC NOISE LEVEL	RESIDUAL NOISE LEVEL	SPECIFIC NOISE LEVEL (IMPROVE NOISE LEVEL)	BACKGROUND NOISE LEVEL	ANNOYANCE NOISE LEVEL
FEBRUARY 16, 2022	NIGHT TIME ^{2/}					
T22AD068-0001	23:25-23:30 HOUR	33.9 ^{2/}	35.1 ***	29.9 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	23:30-23:35 HOUR	33.1 ^{2/}	35.1 ***	29.1 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	23:35-23:40 HOUR	33.3 ^{2/}	35.1 ***	29.3 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	23:40-23:45 HOUR	33.4 ^{2/}	35.1 ***	29.4 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	23:45-23:50 HOUR	34.4 ^{2/}	35.1 ***	30.4 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	23:50-23:55 HOUR	33.7 ^{2/}	35.1 ***	29.7 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	23:55-00:00 HOUR	39.2 ^{2/}	35.1 ***	40.2 ^{2/}	33.8 ***	6.4
FEBRUARY 17, 2022	NIGHT TIME ^{2/}					
T22AD068-0001	00:00-00:05 HOUR	34.2 ^{2/}	35.1 ***	30.2 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	00:05-00:10 HOUR	34.8 ^{2/}	35.1 ***	30.8 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	00:10-00:15 HOUR	33.3 ^{2/}	35.1 ***	29.3 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	00:15-00:20 HOUR	33.3 ^{2/}	35.1 ***	29.3 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	00:20-00:25 HOUR	39.6 ^{2/}	35.1 ***	41.1 ^{2/}	33.8 ***	7.3
	00:25-00:30 HOUR	33.7 ^{2/}	35.1 ***	29.7 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	00:30-00:35 HOUR	37.9 ^{2/}	35.1 ***	37.9 ^{2/}	33.8 ***	4.1
	00:35-00:40 HOUR	33.7 ^{2/}	35.1 ***	29.7 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	00:40-00:45 HOUR	33.3 ^{2/}	35.1 ***	29.3 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	00:45-00:50 HOUR	34.2 ^{2/}	35.1 ***	30.2 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	00:50-00:55 HOUR	34.1 ^{2/}	35.1 ***	30.1 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	00:55-01:00 HOUR	35.3 ^{2/}	35.1 ***	31.3 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	01:00-01:05 HOUR	34.7 ^{2/}	35.1 ***	30.7 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	01:05-01:10 HOUR	37.7 ^{2/}	35.1 ***	37.7 ^{2/}	33.8 ***	3.9
	01:10-01:15 HOUR	33.3 ^{2/}	35.1 ***	29.3 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	01:15-01:20 HOUR	36.0 ^{2/}	35.1 ***	32.0 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	01:20-01:25 HOUR	36.5 ^{2/}	35.1 ***	32.5 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	01:25-01:30 HOUR	36.7 ^{2/}	35.1 ***	35.2 ^{2/}	33.8 ***	1.4
	01:30-01:35 HOUR	34.3 ^{2/}	35.1 ***	30.3 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	01:35-01:40 HOUR	34.5 ^{2/}	35.1 ***	30.5 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	01:40-01:45 HOUR	39.1 ^{2/}	35.1 ***	40.1 ^{2/}	33.8 ***	6.3
	01:45-01:50 HOUR	36.7 ^{2/}	35.1 ***	35.2 ^{2/}	33.8 ***	1.4
	01:50-01:55 HOUR	35.4 ^{2/}	35.1 ***	31.4 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	01:55-02:00 HOUR	34.9 ^{2/}	35.1 ***	30.9 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	02:00-02:05 HOUR	35.1 ^{2/}	35.1 ***	31.1 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	02:05-02:10 HOUR	38.0 ^{2/}	35.1 ***	38.0 ^{2/}	33.8 ***	4.2
	02:10-02:15 HOUR	35.0 ^{2/}	35.1 ***	31.0 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	02:15-02:20 HOUR	36.9 ^{2/}	35.1 ***	35.4 ^{2/}	33.8 ***	1.6
	02:20-02:25 HOUR	36.1 ^{2/}	35.1 ***	32.1 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	02:25-02:30 HOUR	39.5 ^{2/}	35.1 ***	40.5 ^{2/}	33.8 ***	6.7
	02:30-02:35 HOUR	35.6 ^{2/}	35.1 ***	31.6 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	02:35-02:40 HOUR	35.8 ^{2/}	35.1 ***	31.8 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	02:40-02:45 HOUR	35.9 ^{2/}	35.1 ***	31.9 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	02:45-02:50 HOUR	35.8 ^{2/}	35.1 ***	31.8 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	02:50-02:55 HOUR	36.1 ^{2/}	35.1 ***	32.1 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	02:55-03:00 HOUR	38.8 ^{2/}	35.1 ***	39.8 ^{2/}	33.8 ***	6.0
	03:00-03:05 HOUR	35.1 ^{2/}	35.1 ***	31.1 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}

DATE	TIME*	RESULT (dB(A))				
		L53B-N1 : NONG KRANG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)				
		SPECIFIC NOISE LEVEL	RESIDUAL NOISE LEVEL	SPECIFIC NOISE LEVEL (IMPROVE NOISE LEVEL)	BACKGROUND NOISE LEVEL	ANNOYANCE NOISE LEVEL
FEBRUARY 17, 2022	NIGHT TIME ^{2/}					
T22AD068-0001	03:05-03:10 HOUR	33.7 ^{2/}	35.1 ***	29.7 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	03:10-03:15 HOUR	33.3 ^{2/}	35.1 ***	29.3 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	03:15-03:20 HOUR	34.3 ^{2/}	35.1 ***	30.3 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	03:20-03:25 HOUR	35.1 ^{2/}	35.1 ***	31.1 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	03:25-03:30 HOUR	34.0 ^{2/}	35.1 ***	30.0 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	03:30-03:35 HOUR	34.1 ^{2/}	35.1 ***	30.1 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	03:35-03:40 HOUR	39.5 ^{2/}	35.1 ***	40.5 ^{2/}	33.8 ***	6.7
	03:40-03:45 HOUR	36.1 ^{2/}	35.1 ***	32.1 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	03:45-03:50 HOUR	35.5 ^{2/}	35.1 ***	31.5 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	03:50-03:55 HOUR	37.9 ^{2/}	35.1 ***	37.9 ^{2/}	33.8 ***	4.1
	03:55-04:00 HOUR	34.7 ^{2/}	35.1 ***	30.7 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	04:00-04:05 HOUR	35.6 ^{2/}	35.1 ***	31.6 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	04:05-04:10 HOUR	37.2 ^{2/}	35.1 ***	35.7 ^{2/}	33.8 ***	1.9
	04:10-04:15 HOUR	38.5 ^{2/}	35.1 ***	38.5 ^{2/}	33.8 ***	4.7
	04:15-04:20 HOUR	38.9 ^{2/}	35.1 ***	39.9 ^{2/}	33.8 ***	6.1
	04:20-04:25 HOUR	36.4 ^{2/}	35.1 ***	32.4 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	04:25-04:30 HOUR	35.7 ^{2/}	35.1 ***	31.7 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	04:30-04:35 HOUR	35.7 ^{2/}	35.1 ***	31.7 ^{2/}	33.8 ***	NOT SIGNIFICANT ^{3/}
	04:35-04:40 HOUR	37.6 ^{2/}	35.1 ***	37.6 ^{2/}	33.8 ***	3.8
	04:40-04:45 HOUR	38.7 ^{2/}	35.1 ***	39.7 ^{2/}	33.8 ***	5.9
	04:45-04:50 HOUR	37.0 ^{2/}	35.1 ***	35.5 ^{2/}	33.8 ***	1.7
	04:50-04:55 HOUR	39.8 ^{2/}	35.1 ***	41.3 ^{2/}	33.8 ***	7.5
	04:55-05:00 HOUR	39.1 ^{2/}	35.1 ***	40.1 ^{2/}	33.8 ***	6.3
	05:00-05:05 HOUR	37.1 ^{2/}	35.1 ***	35.6 ^{2/}	33.8 ***	1.8
	05:05-05:10 HOUR	39.5 ^{2/}	35.1 ***	40.5 ^{2/}	33.8 ***	6.7
	05:10-05:15 HOUR	38.9 ^{2/}	35.1 ***	39.9 ^{2/}	33.8 ***	6.1
	05:15-05:20 HOUR	39.4 ^{2/}	35.1 ***	40.4 ^{2/}	33.8 ***	6.6
	05:20-05:25 HOUR	39.3 ^{2/}	35.1 ***	40.3 ^{2/}	33.8 ***	6.5
	05:25-05:30 HOUR	37.3 ^{2/}	35.1 ***	35.8 ^{2/}	33.8 ***	2.0
	05:30-05:35 HOUR	37.0 ^{2/}	35.1 ***	35.5 ^{2/}	33.8 ***	1.7
	05:35-05:40 HOUR	37.6 ^{2/}	35.1 ***	37.6 ^{2/}	33.8 ***	3.8
	05:40-05:45 HOUR	37.3 ^{2/}	35.1 ***	35.8 ^{2/}	33.8 ***	2.0
	05:45-05:50 HOUR	37.2 ^{2/}	35.1 ***	35.7 ^{2/}	33.8 ***	1.9
	05:50-05:55 HOUR	37.9 ^{2/}	35.1 ***	37.9 ^{2/}	33.8 ***	4.1
	05:55-06:00 HOUR	36.8 ^{2/}	35.1 ***	35.3 ^{2/}	33.8 ***	1.5
	DAY TIME ^{1/}					
	06:00-07:00 HOUR	47.5 ^{1/}	45.0 **	44.5 ^{1/}	42.1 **	2.4
FEBRUARY 17, 2022	DAY TIME ^{1/}					
T22AD068-0002	07:00-08:00 HOUR	50.8 ^{1/}	43.9 **	49.8 ^{1/}	41.5 **	8.3
	08:00-09:00 HOUR	48.1 ^{1/}	43.9 **	46.1 ^{1/}	41.5 **	4.6
	09:00-10:00 HOUR	48.9 ^{1/}	43.9 **	47.4 ^{1/}	41.5 **	5.9
	10:00-11:00 HOUR	46.8 ^{1/}	43.9 **	43.8 ^{1/}	41.5 **	2.3
	11:00-12:00 HOUR	47.1 ^{1/}	43.9 **	44.1 ^{1/}	41.5 **	2.6
	12:00-13:00 HOUR	45.9 ^{1/}	43.9 **	41.4 ^{1/}	41.5 **	NOT SIGNIFICANT ^{3/}
	13:00-14:00 HOUR	44.2 ^{1/}	43.9 **	37.2 ^{1/}	41.5 **	NOT SIGNIFICANT ^{3/}

DATE	TIME*	RESULT (dB(A))				
		L53B-N1 : NONG KRANG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)				
		SPECIFIC NOISE LEVEL	RESIDUAL NOISE LEVEL	SPECIFIC NOISE LEVEL (IMPROVE NOISE LEVEL)	BACKGROUND NOISE LEVEL	ANNOYANCE NOISE LEVEL
FEBRUARY 17, 2022 T22AD068-0002	DAY TIME ^{1/}					
	14:00-15:00 HOUR	44.8 ^{1/}	43.9 **	37.8 ^{1/}	41.5 **	NOT SIGNIFICANT ^{3/}
	15:00-16:00 HOUR	44.9 ^{1/}	43.9 **	37.9 ^{1/}	41.5 **	NOT SIGNIFICANT ^{3/}
	16:00-17:00 HOUR	47.3 ^{1/}	43.9 **	44.3 ^{1/}	41.5 **	2.8
	17:00-18:00 HOUR	50.9 ^{1/}	43.9 **	49.9 ^{1/}	41.5 **	8.4
	18:00-19:00 HOUR	47.3 ^{1/}	43.9 **	44.3 ^{1/}	41.5 **	2.8
	19:00-20:00 HOUR	44.3 ^{1/}	43.9 **	37.3 ^{1/}	41.5 **	NOT SIGNIFICANT ^{3/}
	20:00-21:00 HOUR	44.5 ^{1/}	43.9 **	37.5 ^{1/}	41.5 **	NOT SIGNIFICANT ^{3/}
	21:00-22:00 HOUR	44.0 ^{1/}	43.9 **	37.0 ^{1/}	41.5 **	NOT SIGNIFICANT ^{3/}
	NIGHT TIME ^{2/}					
	22:00-22:05 HOUR	39.1 ^{2/}	37.3 ***	37.6 ^{2/}	35.7 ***	1.9
	22:05-22:10 HOUR	38.5 ^{2/}	37.3 ***	34.5 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	22:10-22:15 HOUR	38.8 ^{2/}	37.3 ***	37.3 ^{2/}	35.7 ***	1.6
	22:15-22:20 HOUR	39.9 ^{2/}	37.3 ***	39.9 ^{2/}	35.7 ***	4.2
	22:20-22:25 HOUR	38.8 ^{2/}	37.3 ***	37.3 ^{2/}	35.7 ***	1.6
	22:25-22:30 HOUR	37.9 ^{2/}	37.3 ***	33.9 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	22:30-22:35 HOUR	38.8 ^{2/}	37.3 ***	37.3 ^{2/}	35.7 ***	1.6
	22:35-22:40 HOUR	38.2 ^{2/}	37.3 ***	34.2 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	22:40-22:45 HOUR	40.2 ^{2/}	37.3 ***	40.2 ^{2/}	35.7 ***	4.5
	22:45-22:50 HOUR	38.7 ^{2/}	37.3 ***	34.7 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	22:50-22:55 HOUR	38.8 ^{2/}	37.3 ***	37.3 ^{2/}	35.7 ***	1.6
	22:55-23:00 HOUR	38.1 ^{2/}	37.3 ***	34.1 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	23:00-23:05 HOUR	39.1 ^{2/}	37.3 ***	37.6 ^{2/}	35.7 ***	1.9
	23:05-23:10 HOUR	38.0 ^{2/}	37.3 ***	34.0 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	23:10-23:15 HOUR	41.1 ^{2/}	37.3 ***	42.1 ^{2/}	35.7 ***	6.4
	23:15-23:20 HOUR	38.4 ^{2/}	37.3 ***	34.4 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	23:20-23:25 HOUR	39.9 ^{2/}	37.3 ***	39.9 ^{2/}	35.7 ***	4.2
	23:25-23:30 HOUR	39.9 ^{2/}	37.3 ***	39.9 ^{2/}	35.7 ***	4.2
	23:30-23:35 HOUR	41.6 ^{2/}	37.3 ***	42.6 ^{2/}	35.7 ***	6.9
	23:35-23:40 HOUR	39.4 ^{2/}	37.3 ***	37.9 ^{2/}	35.7 ***	2.2
	23:40-23:45 HOUR	38.6 ^{2/}	37.3 ***	34.6 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	23:45-23:50 HOUR	38.2 ^{2/}	37.3 ***	34.2 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	23:50-23:55 HOUR	38.2 ^{2/}	37.3 ***	34.2 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	23:55-00:00 HOUR	38.2 ^{2/}	37.3 ***	34.2 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
FEBRUARY 18, 2022 T22AD068-0002	NIGHT TIME ^{2/}					
	00:00-00:05 HOUR	38.6 ^{2/}	37.3 ***	34.6 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	00:05-00:10 HOUR	41.9 ^{2/}	37.3 ***	43.4 ^{2/}	35.7 ***	7.7
	00:10-00:15 HOUR	38.1 ^{2/}	37.3 ***	34.1 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	00:15-00:20 HOUR	39.1 ^{2/}	37.3 ***	37.6 ^{2/}	35.7 ***	1.9
	00:20-00:25 HOUR	38.2 ^{2/}	37.3 ***	34.2 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	00:25-00:30 HOUR	41.9 ^{2/}	37.3 ***	43.4 ^{2/}	35.7 ***	7.7
	00:30-00:35 HOUR	38.8 ^{2/}	37.3 ***	37.3 ^{2/}	35.7 ***	1.6
	00:35-00:40 HOUR	39.2 ^{2/}	37.3 ***	37.7 ^{2/}	35.7 ***	2.0
	00:40-00:45 HOUR	38.0 ^{2/}	37.3 ***	34.0 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	00:45-00:50 HOUR	38.7 ^{2/}	37.3 ***	34.7 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	00:50-00:55 HOUR	40.2 ^{2/}	37.3 ***	40.2 ^{2/}	35.7 ***	4.5

DATE	TIME*	RESULT (dB(A))				
		L53B-N1 : NONG KRANG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)				
		SPECIFIC NOISE LEVEL	RESIDUAL NOISE LEVEL	SPECIFIC NOISE LEVEL (IMPROVE NOISE LEVEL)	BACKGROUND NOISE LEVEL	ANNOYANCE NOISE LEVEL
FEBRUARY 18, 2022	NIGHT TIME ^{2/}					
T22AD068-0002	00:55-01:00 HOUR	40.2 ^{2/}	37.3 ***	40.2 ^{2/}	35.7 ***	4.5
	01:00-01:05 HOUR	39.2 ^{2/}	37.3 ***	37.7 ^{2/}	35.7 ***	2.0
	01:05-01:10 HOUR	39.1 ^{2/}	37.3 ***	37.6 ^{2/}	35.7 ***	1.9
	01:10-01:15 HOUR	38.5 ^{2/}	37.3 ***	34.5 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	01:15-01:20 HOUR	40.8 ^{2/}	37.3 ***	41.8 ^{2/}	35.7 ***	6.1
	01:20-01:25 HOUR	42.7 ^{2/}	37.3 ***	44.2 ^{2/}	35.7 ***	8.5
	01:25-01:30 HOUR	39.3 ^{2/}	37.3 ***	37.8 ^{2/}	35.7 ***	2.1
	01:30-01:35 HOUR	37.9 ^{2/}	37.3 ***	33.9 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	01:35-01:40 HOUR	38.2 ^{2/}	37.3 ***	34.2 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	01:40-01:45 HOUR	38.6 ^{2/}	37.3 ***	34.6 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	01:45-01:50 HOUR	38.2 ^{2/}	37.3 ***	34.2 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	01:50-01:55 HOUR	38.1 ^{2/}	37.3 ***	34.1 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	01:55-02:00 HOUR	38.2 ^{2/}	37.3 ***	34.2 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	02:00-02:05 HOUR	41.7 ^{2/}	37.3 ***	42.7 ^{2/}	35.7 ***	7.0
	02:05-02:10 HOUR	38.2 ^{2/}	37.3 ***	34.2 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	02:10-02:15 HOUR	38.2 ^{2/}	37.3 ***	34.2 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	02:15-02:20 HOUR	38.1 ^{2/}	37.3 ***	34.1 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	02:20-02:25 HOUR	37.8 ^{2/}	37.3 ***	33.8 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	02:25-02:30 HOUR	37.5 ^{2/}	37.3 ***	33.5 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	02:30-02:35 HOUR	37.5 ^{2/}	37.3 ***	33.5 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	02:35-02:40 HOUR	39.9 ^{2/}	37.3 ***	39.9 ^{2/}	35.7 ***	4.2
	02:40-02:45 HOUR	38.3 ^{2/}	37.3 ***	34.3 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	02:45-02:50 HOUR	38.4 ^{2/}	37.3 ***	34.4 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	02:50-02:55 HOUR	38.0 ^{2/}	37.3 ***	34.0 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	02:55-03:00 HOUR	38.5 ^{2/}	37.3 ***	34.5 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	03:00-03:05 HOUR	38.1 ^{2/}	37.3 ***	34.1 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	03:05-03:10 HOUR	39.3 ^{2/}	37.3 ***	37.8 ^{2/}	35.7 ***	2.1
	03:10-03:15 HOUR	37.9 ^{2/}	37.3 ***	33.9 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	03:15-03:20 HOUR	37.6 ^{2/}	37.3 ***	33.6 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	03:20-03:25 HOUR	38.2 ^{2/}	37.3 ***	34.2 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	03:25-03:30 HOUR	38.2 ^{2/}	37.3 ***	34.2 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	03:30-03:35 HOUR	37.9 ^{2/}	37.3 ***	33.9 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	03:35-03:40 HOUR	42.4 ^{2/}	37.3 ***	43.9 ^{2/}	35.7 ***	8.2
	03:40-03:45 HOUR	38.6 ^{2/}	37.3 ***	34.6 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	03:45-03:50 HOUR	37.8 ^{2/}	37.3 ***	33.8 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	03:50-03:55 HOUR	38.3 ^{2/}	37.3 ***	34.3 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	03:55-04:00 HOUR	38.1 ^{2/}	37.3 ***	34.1 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	04:00-04:05 HOUR	37.5 ^{2/}	37.3 ***	33.5 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	04:05-04:10 HOUR	37.5 ^{2/}	37.3 ***	33.5 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	04:10-04:15 HOUR	38.2 ^{2/}	37.3 ***	34.2 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	04:15-04:20 HOUR	37.8 ^{2/}	37.3 ***	33.8 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	04:20-04:25 HOUR	37.8 ^{2/}	37.3 ***	33.8 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	04:25-04:30 HOUR	39.1 ^{2/}	37.3 ***	37.6 ^{2/}	35.7 ***	1.9
	04:30-04:35 HOUR	37.8 ^{2/}	37.3 ***	33.8 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	04:35-04:40 HOUR	38.7 ^{2/}	37.3 ***	34.7 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}

DATE	TIME*	RESULT (dB(A))				
		L53B-N1 : NONG KRANG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)				
		SPECIFIC NOISE LEVEL	RESIDUAL NOISE LEVEL	SPECIFIC NOISE LEVEL (IMPROVE NOISE LEVEL)	BACKGROUND NOISE LEVEL	ANNOYANCE NOISE LEVEL
FEBRUARY 18, 2022 T22AD068-0002	NIGHT TIME ^{2/}					
	04:40-04:45 HOUR	38.9 ^{2/}	37.3 ***	37.4 ^{2/}	35.7 ***	1.7
	04:45-04:50 HOUR	39.6 ^{2/}	37.3 ***	38.1 ^{2/}	35.7 ***	2.4
	04:50-04:55 HOUR	37.7 ^{2/}	37.3 ***	33.7 ^{2/}	35.7 ***	NOT SIGNIFICANT ^{3/}
	04:55-05:00 HOUR	41.6 ^{2/}	37.3 ***	42.6 ^{2/}	35.7 ***	6.9
	05:00-05:05 HOUR	42.4 ^{2/}	37.3 ***	43.9 ^{2/}	35.7 ***	8.2
	05:05-05:10 HOUR	42.1 ^{2/}	37.3 ***	43.6 ^{2/}	35.7 ***	7.9
	05:10-05:15 HOUR	39.7 ^{2/}	37.3 ***	38.2 ^{2/}	35.7 ***	2.5
	05:15-05:20 HOUR	41.3 ^{2/}	37.3 ***	42.3 ^{2/}	35.7 ***	6.6
	05:20-05:25 HOUR	38.8 ^{2/}	37.3 ***	37.3 ^{2/}	35.7 ***	1.6
	05:25-05:30 HOUR	39.0 ^{2/}	37.3 ***	37.5 ^{2/}	35.7 ***	1.8
	05:30-05:35 HOUR	40.6 ^{2/}	37.3 ***	40.6 ^{2/}	35.7 ***	4.9
	05:35-05:40 HOUR	39.7 ^{2/}	37.3 ***	38.2 ^{2/}	35.7 ***	2.5
	05:40-05:45 HOUR	42.9 ^{2/}	37.3 ***	44.4 ^{2/}	35.7 ***	8.7
	05:45-05:50 HOUR	42.6 ^{2/}	37.3 ***	44.1 ^{2/}	35.7 ***	8.4
	05:50-05:55 HOUR	42.8 ^{2/}	37.3 ***	44.3 ^{2/}	35.7 ***	8.6
	05:55-06:00 HOUR	42.6 ^{2/}	37.3 ***	44.1 ^{2/}	35.7 ***	8.4
	DAY TIME ^{1/}					
	06:00-07:00 HOUR	49.4 ^{1/}	43.9 **	47.9 ^{1/}	41.5 **	6.4
FEBRUARY 18, 2022 T22AD068-0003	DAY TIME ^{1/}					
	07:00-08:00 HOUR	49.2 ^{1/}	45.0 **	47.2 ^{1/}	43.3 **	3.9
	08:00-09:00 HOUR	49.7 ^{1/}	45.0 **	48.2 ^{1/}	43.3 **	4.9
	09:00-10:00 HOUR	51.0 ^{1/}	45.0 **	49.5 ^{1/}	43.3 **	6.2
	10:00-11:00 HOUR	49.4 ^{1/}	45.0 **	47.4 ^{1/}	43.3 **	4.1
	11:00-12:00 HOUR	50.1 ^{1/}	45.0 **	48.6 ^{1/}	43.3 **	5.3
	12:00-13:00 HOUR	47.5 ^{1/}	45.0 **	44.5 ^{1/}	43.3 **	1.2
	13:00-14:00 HOUR	50.5 ^{1/}	45.0 **	49.0 ^{1/}	43.3 **	5.7
	14:00-15:00 HOUR	51.2 ^{1/}	45.0 **	49.7 ^{1/}	43.3 **	6.4
	15:00-16:00 HOUR	48.7 ^{1/}	45.0 **	46.7 ^{1/}	43.3 **	3.4
	16:00-17:00 HOUR	48.8 ^{1/}	45.0 **	46.8 ^{1/}	43.3 **	3.5
	17:00-18:00 HOUR	48.1 ^{1/}	45.0 **	45.1 ^{1/}	43.3 **	1.8
	18:00-19:00 HOUR	47.2 ^{1/}	45.0 **	42.7 ^{1/}	43.3 **	NOT SIGNIFICANT ^{3/}
	19:00-20:00 HOUR	45.4 ^{1/}	45.0 **	38.4 ^{1/}	43.3 **	NOT SIGNIFICANT ^{3/}
	20:00-21:00 HOUR	45.0 ^{1/}	45.0 **	38.0 ^{1/}	43.3 **	NOT SIGNIFICANT ^{3/}
	21:00-22:00 HOUR	47.5 ^{1/}	45.0 **	44.5 ^{1/}	43.3 **	1.2
	NIGHT TIME ^{2/}					
	22:00-22:05 HOUR	45.7 ^{2/}	41.9 ***	46.7 ^{2/}	40.9 ***	5.8
	22:05-22:10 HOUR	44.9 ^{2/}	41.9 ***	44.9 ^{2/}	40.9 ***	4.0
	22:10-22:15 HOUR	43.6 ^{2/}	41.9 ***	42.1 ^{2/}	40.9 ***	1.2
	22:15-22:20 HOUR	43.3 ^{2/}	41.9 ***	39.3 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	22:20-22:25 HOUR	43.5 ^{2/}	41.9 ***	42.0 ^{2/}	40.9 ***	1.1
	22:25-22:30 HOUR	43.2 ^{2/}	41.9 ***	39.2 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	22:30-22:35 HOUR	43.0 ^{2/}	41.9 ***	39.0 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	22:35-22:40 HOUR	42.6 ^{2/}	41.9 ***	38.6 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	22:40-22:45 HOUR	42.3 ^{2/}	41.9 ***	38.3 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	22:45-22:50 HOUR	43.1 ^{2/}	41.9 ***	39.1 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}

DATE	TIME*	RESULT (dB(A))				
		L53B-N1 : NONG KRANG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)				
		SPECIFIC NOISE LEVEL	RESIDUAL NOISE LEVEL	SPECIFIC NOISE LEVEL (IMPROVE NOISE LEVEL)	BACKGROUND NOISE LEVEL	ANNOYANCE NOISE LEVEL
FEBRUARY 18, 2022 T22AD068-0003	NIGHT TIME ^{2/}					
	22:50-22:55 HOUR	41.9 ^{2/}	41.9 ***	37.9 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	22:55-23:00 HOUR	41.7 ^{2/}	41.9 ***	37.7 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	23:00-23:05 HOUR	41.9 ^{2/}	41.9 ***	37.9 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	23:05-23:10 HOUR	42.7 ^{2/}	41.9 ***	38.7 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	23:10-23:15 HOUR	41.9 ^{2/}	41.9 ***	37.9 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	23:15-23:20 HOUR	42.3 ^{2/}	41.9 ***	38.3 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	23:20-23:25 HOUR	42.0 ^{2/}	41.9 ***	38.0 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	23:25-23:30 HOUR	42.2 ^{2/}	41.9 ***	38.2 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	23:30-23:35 HOUR	43.0 ^{2/}	41.9 ***	39.0 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	23:35-23:40 HOUR	42.8 ^{2/}	41.9 ***	38.8 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	23:40-23:45 HOUR	42.9 ^{2/}	41.9 ***	38.9 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	23:45-23:50 HOUR	42.9 ^{2/}	41.9 ***	38.9 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	23:50-23:55 HOUR	43.9 ^{2/}	41.9 ***	42.4 ^{2/}	40.9 ***	1.5
	23:55-00:00 HOUR	45.2 ^{2/}	41.9 ***	45.2 ^{2/}	40.9 ***	4.3
FEBRUARY 19, 2022 T22AD068-0003	NIGHT TIME ^{2/}					
	00:00-00:05 HOUR	44.6 ^{2/}	41.9 ***	44.6 ^{2/}	40.9 ***	3.7
	00:05-00:10 HOUR	43.9 ^{2/}	41.9 ***	42.4 ^{2/}	40.9 ***	1.5
	00:10-00:15 HOUR	43.5 ^{2/}	41.9 ***	42.0 ^{2/}	40.9 ***	1.1
	00:15-00:20 HOUR	43.9 ^{2/}	41.9 ***	42.4 ^{2/}	40.9 ***	1.5
	00:20-00:25 HOUR	44.0 ^{2/}	41.9 ***	42.5 ^{2/}	40.9 ***	1.6
	00:25-00:30 HOUR	44.2 ^{2/}	41.9 ***	42.7 ^{2/}	40.9 ***	1.8
	00:30-00:35 HOUR	44.0 ^{2/}	41.9 ***	42.5 ^{2/}	40.9 ***	1.6
	00:35-00:40 HOUR	44.0 ^{2/}	41.9 ***	42.5 ^{2/}	40.9 ***	1.6
	00:40-00:45 HOUR	44.4 ^{2/}	41.9 ***	44.4 ^{2/}	40.9 ***	3.5
	00:45-00:50 HOUR	43.9 ^{2/}	41.9 ***	42.4 ^{2/}	40.9 ***	1.5
	00:50-00:55 HOUR	45.7 ^{2/}	41.9 ***	46.7 ^{2/}	40.9 ***	5.8
	00:55-01:00 HOUR	44.2 ^{2/}	41.9 ***	42.7 ^{2/}	40.9 ***	1.8
	01:00-01:05 HOUR	43.7 ^{2/}	41.9 ***	42.2 ^{2/}	40.9 ***	1.3
	01:05-01:10 HOUR	45.3 ^{2/}	41.9 ***	45.3 ^{2/}	40.9 ***	4.4
	01:10-01:15 HOUR	43.5 ^{2/}	41.9 ***	42.0 ^{2/}	40.9 ***	1.1
	01:15-01:20 HOUR	44.0 ^{2/}	41.9 ***	42.5 ^{2/}	40.9 ***	1.6
	01:20-01:25 HOUR	43.7 ^{2/}	41.9 ***	42.2 ^{2/}	40.9 ***	1.3
	01:25-01:30 HOUR	43.8 ^{2/}	41.9 ***	42.3 ^{2/}	40.9 ***	1.4
	01:30-01:35 HOUR	43.3 ^{2/}	41.9 ***	39.3 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	01:35-01:40 HOUR	44.4 ^{2/}	41.9 ***	44.4 ^{2/}	40.9 ***	3.5
	01:40-01:45 HOUR	44.0 ^{2/}	41.9 ***	42.5 ^{2/}	40.9 ***	1.6
	01:45-01:50 HOUR	43.4 ^{2/}	41.9 ***	41.9 ^{2/}	40.9 ***	1.0
	01:50-01:55 HOUR	43.3 ^{2/}	41.9 ***	39.3 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	01:55-02:00 HOUR	47.6 ^{2/}	41.9 ***	49.1 ^{2/}	40.9 ***	8.2
	02:00-02:05 HOUR	43.5 ^{2/}	41.9 ***	42.0 ^{2/}	40.9 ***	1.1
	02:05-02:10 HOUR	43.7 ^{2/}	41.9 ***	42.2 ^{2/}	40.9 ***	1.3
	02:10-02:15 HOUR	42.9 ^{2/}	41.9 ***	38.9 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	02:15-02:20 HOUR	42.6 ^{2/}	41.9 ***	38.6 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	02:20-02:25 HOUR	42.7 ^{2/}	41.9 ***	38.7 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	02:25-02:30 HOUR	42.4 ^{2/}	41.9 ***	38.4 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}

DATE	TIME*	RESULT (dB(A))				
		L53B-N1 : NONG KRANG CHURCH (UTM WGS 84 ZONE 47P 597912E 1554310N)				
		SPECIFIC NOISE LEVEL	RESIDUAL NOISE LEVEL	SPECIFIC NOISE LEVEL (IMPROVE NOISE LEVEL)	BACKGROUND NOISE LEVEL	ANNOYANCE NOISE LEVEL
FEBRUARY 19, 2022	NIGHT TIME ^{2/}					
T22AD068-0003	02:30-02:35 HOUR	41.8 ^{2/}	41.9 ***	37.8 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	02:35-02:40 HOUR	42.2 ^{2/}	41.9 ***	38.2 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	02:40-02:45 HOUR	43.9 ^{2/}	41.9 ***	42.4 ^{2/}	40.9 ***	1.5
	02:45-02:50 HOUR	46.2 ^{2/}	41.9 ***	47.2 ^{2/}	40.9 ***	6.3
	02:50-02:55 HOUR	43.4 ^{2/}	41.9 ***	41.9 ^{2/}	40.9 ***	1.0
	02:55-03:00 HOUR	42.9 ^{2/}	41.9 ***	38.9 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	03:00-03:05 HOUR	43.6 ^{2/}	41.9 ***	42.1 ^{2/}	40.9 ***	1.2
	03:05-03:10 HOUR	42.1 ^{2/}	41.9 ***	38.1 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	03:10-03:15 HOUR	41.9 ^{2/}	41.9 ***	37.9 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	03:15-03:20 HOUR	41.9 ^{2/}	41.9 ***	37.9 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	03:20-03:25 HOUR	41.6 ^{2/}	41.9 ***	37.6 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	03:25-03:30 HOUR	42.2 ^{2/}	41.9 ***	38.2 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	03:30-03:35 HOUR	41.7 ^{2/}	41.9 ***	37.7 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	03:35-03:40 HOUR	41.5 ^{2/}	41.9 ***	37.5 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	03:40-03:45 HOUR	41.5 ^{2/}	41.9 ***	37.5 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	03:45-03:50 HOUR	41.6 ^{2/}	41.9 ***	37.6 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	03:50-03:55 HOUR	41.5 ^{2/}	41.9 ***	37.5 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	03:55-04:00 HOUR	42.4 ^{2/}	41.9 ***	38.4 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	04:00-04:05 HOUR	40.8 ^{2/}	41.9 ***	36.8 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	04:05-04:10 HOUR	41.5 ^{2/}	41.9 ***	37.5 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	04:10-04:15 HOUR	40.9 ^{2/}	41.9 ***	36.9 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	04:15-04:20 HOUR	45.2 ^{2/}	41.9 ***	45.2 ^{2/}	40.9 ***	4.3
	04:20-04:25 HOUR	45.6 ^{2/}	41.9 ***	46.6 ^{2/}	40.9 ***	5.7
	04:25-04:30 HOUR	44.3 ^{2/}	41.9 ***	42.8 ^{2/}	40.9 ***	1.9
	04:30-04:35 HOUR	41.4 ^{2/}	41.9 ***	37.4 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	04:35-04:40 HOUR	41.5 ^{2/}	41.9 ***	37.5 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	04:40-04:45 HOUR	44.0 ^{2/}	41.9 ***	42.5 ^{2/}	40.9 ***	1.6
	04:45-04:50 HOUR	42.9 ^{2/}	41.9 ***	38.9 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	04:50-04:55 HOUR	42.4 ^{2/}	41.9 ***	38.4 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	04:55-05:00 HOUR	42.5 ^{2/}	41.9 ***	38.5 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	05:00-05:05 HOUR	44.0 ^{2/}	41.9 ***	42.5 ^{2/}	40.9 ***	1.6
	05:05-05:10 HOUR	44.6 ^{2/}	41.9 ***	44.6 ^{2/}	40.9 ***	3.7
	05:10-05:15 HOUR	46.6 ^{2/}	41.9 ***	48.1 ^{2/}	40.9 ***	7.2
	05:15-05:20 HOUR	43.7 ^{2/}	41.9 ***	42.2 ^{2/}	40.9 ***	1.3
	05:20-05:25 HOUR	42.3 ^{2/}	41.9 ***	38.3 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	05:25-05:30 HOUR	42.4 ^{2/}	41.9 ***	38.4 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	05:30-05:35 HOUR	42.5 ^{2/}	41.9 ***	38.5 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	05:35-05:40 HOUR	42.6 ^{2/}	41.9 ***	38.6 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	05:40-05:45 HOUR	42.3 ^{2/}	41.9 ***	38.3 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	05:45-05:50 HOUR	42.9 ^{2/}	41.9 ***	38.9 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	05:50-05:55 HOUR	45.6 ^{2/}	41.9 ***	46.6 ^{2/}	40.9 ***	5.7
	05:55-06:00 HOUR	42.7 ^{2/}	41.9 ***	38.7 ^{2/}	40.9 ***	NOT SIGNIFICANT ^{3/}
	DAY TIME ^{1/}					
	06:00-07:00 HOUR	49.6 ^{1/}	45.0 **	48.1 ^{1/}	43.3 **	4.8

REMARK :

- 1/ CASE 1 CALCULATION (DURING 06:00 TO 22:00 HOUR) : SPECIFIC NOISE LEVEL CONTINUOUSLY OCCUR AT LEAST 1 HOUR, MEASURING AS L_{Aeq} 1 hour.
- 2/ CASE 4 CALCULATION (DURING 22:00 TO 06:00 HOUR) : SPECIFIC NOISE LEVEL OCCUR IN RESTFUL AREA OR NIGHT TIME, MEASURING AS L_{Aeq} 5 minutes.
- 3/ NOT SIGNIFICANT MEANS ANNOYING NOISE LEVEL IS LOWER THAN 0.
- ** PERCENTILE LEVEL 90 (L_{A90}) IS MIDDLE VALUE OF 3 TIMES MEASURING.
(15 MINUTES MEASURING DURING 06:00 TO 22:00 HOUR)
AND RESIDUAL NOISE LEVEL (L_{Aeq} 5 minutes) IS CHOSE AT THE SAME TIME AS PERCENTILE LEVEL 90 ABOVE.
- *** PERCENTILE LEVEL 90 (L_{A90}) IS MIDDLE VALUE OF 3 TIMES MEASURING.
(15 MINUTES MEASURING DURING 22:00 TO 06:00 HOUR)
AND RESIDUAL NOISE LEVEL (L_{Aeq} 5 minutes) IS CHOSE AT THE SAME TIME AS PERCENTILE LEVEL 90 ABOVE.

Sila Banjongjairuk

(MR SILA BANJONGJAIRUK)
LABORATORY SUPERVISOR

MARCH 6, 2022

คุณภาพน้ำผิวดิน



ANALYSIS REPORT

CUSTOMER NAME : PAN ORIENT ENERGY (SIAM) LIMITED
ADDRESS : 555 RASA TOWER II 17TH FLOOR UNIT 1702 PHAHONYOTHIN ROAD, CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com
SAMPLING SOURCE : L53B-S1 (UTM WGS 84 ZONE 47P 597894E 1554770N)
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : FEBRUARY 16, 2022
SAMPLING TIME : 12:20 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR KRIDSANAPONG NAMTHIP
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : FEBRUARY 17, 2022
ANALYTICAL DATE : FEBRUARY 17 - MARCH 3, 2022
REPORT NO. : 2022-U015570
WORK NO. : 2022-000520
ANALYSIS NO. : T22AC810-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			L53B-S1 T22AC810-0001	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	8.4 (28°C)	-
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	28	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,230 (28°C)	0.1
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O C)	5.4	0.5
SALINITY °	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	1.6	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	1.8	1.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	1,690	25
TOTAL PETROLEUM HYDROCARBONS °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D AND 5520 F)	ND	3
METALS				
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0117	0.0003
BARIUM °	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.037	0.003
CADMIUM °	mg/L Cd	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.002
IRON °	mg/L Fe	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	< LOQ	0.005
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
MANGANESE °	mg/L Mn	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	< LOQ	0.002
MERCURY °	mg/L Hg	IN-HOUSE METHOD: UAE.TP.HEM.002 (COLD VAPOUR ATOMIC ABSORPTION SPECTROMETRIC METHOD); SM: 3112 B	< LOQ	0.0001
NICKEL °	mg/L Ni	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			L53B-S1 T22AC810-0001	
SELENIUM ^c	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	ND	0.0005
TOTAL CHROMIUM ^c	mg/L Cr	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005
ZINC ^c	mg/L Zn	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
MICROBIOLOGY				
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	7.8	1.8
SAMPLE CONDITION				
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

ND : NON-DETECTABLE.

< LOQ : < LEVEL OF QUANTITATION (IRON ≥ 0.005 AND < 0.050 mg/L, MANGANESE ≥ 0.002 AND < 0.025 mg/L,
MERCURY ≥ 0.0001 AND < 0.0005 mg/L).

Benjawan V.

(MISS BENJAWAN VIRIYOTHAJ)
LABORATORY SUPERVISOR

MARCH 4, 2022

ANALYSIS REPORT

CUSTOMER NAME : PAN ORIENT ENERGY (SIAM) LIMITED
ADDRESS : 555 RASA TOWER II 17TH FLOOR UNIT 1702 PHAHONYOTHIN ROAD, CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com
SAMPLING SOURCE : L53B-S2 (UTM WGS 84 ZONE 47P 597729E 1553882N)
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : FEBRUARY 16, 2022
SAMPLING TIME : 12:55 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR KRIDSANAPONG NAMTHIP
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : FEBRUARY 17, 2022
ANALYTICAL DATE : FEBRUARY 17 - MARCH 3, 2022
REPORT NO. : 2022-U015571
WORK NO. : 2022-000520
ANALYSIS NO. : T22AC810-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			L53B-S2 T22AC810-0002	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	8.1 (28°C)	-
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	28	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	170 (28°C)	0.1
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O C)	5.7	0.5
SALINITY °	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	0.1	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	1.4	1.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	22.8	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	126	25
TOTAL PETROLEUM HYDROCARBONS °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D AND 5520 F)	ND	3
METALS				
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0048	0.0003
BARIUM °	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.035	0.003
CADMIUM °	mg/L Cd	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.002
IRON °	mg/L Fe	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	0.330	0.005
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
MANGANESE °	mg/L Mn	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	0.032	0.002
MERCURY °	mg/L Hg	IN-HOUSE METHOD: UAE.TP.HEM.002 (COLD VAPOUR ATOMIC ABSORPTION SPECTROMETRIC METHOD); SM: 3112 B	ND	0.0001
NICKEL °	mg/L Ni	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			L53B-S2 T22AC810-0002	
SELENIUM ^c	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	ND	0.0005
TOTAL CHROMIUM ^c	mg/L Cr	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005
ZINC ^c	mg/L Zn	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
MICROBIOLOGY				
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	790	1.8
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
SEDIMENT			BROWN	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

ND : NON-DETECTABLE.

Benjawan V.

(MISS BENJAWAN VIRIYOTHAJ)
LABORATORY SUPERVISOR

MARCH 4, 2022

ANALYSIS REPORT

CUSTOMER NAME : PAN ORIENT ENERGY (SIAM) LIMITED
ADDRESS : 555 RASA TOWER II 17TH FLOOR UNIT 1702 PHAHONYOTHIN ROAD, CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com
SAMPLING SOURCE : L53B-S3 (UTM WGS 84 ZONE 47P 597468E 1554027N)
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : FEBRUARY 16, 2022
SAMPLING TIME : 12:45 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR KRIDSANAPONG NAMTHIP
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : FEBRUARY 17, 2022
ANALYTICAL DATE : FEBRUARY 17 - MARCH 3, 2022
REPORT NO. : 2022-U015572
WORK NO. : 2022-000520
ANALYSIS NO. : T22AC810-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			L53B-S3 T22AC810-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	8.0 (28°C)	-
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	28	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	224 (28°C)	0.1
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O C)	5.7	0.5
SALINITY °	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	0.2	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	ND	1.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	19.5	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	121	25
TOTAL PETROLEUM HYDROCARBONS °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D AND 5520 F)	ND	3
METALS				
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0046	0.0003
BARIUM °	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.034	0.003
CADMIUM °	mg/L Cd	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.002
IRON °	mg/L Fe	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	0.740	0.005
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
MANGANESE °	mg/L Mn	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	0.048	0.002
MERCURY °	mg/L Hg	IN-HOUSE METHOD: UAE.TP.HEM.002 (COLD VAPOUR ATOMIC ABSORPTION SPECTROMETRIC METHOD); SM: 3112 B	ND	0.0001
NICKEL °	mg/L Ni	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			L53B-S3 T22AC810-0003	
SELENIUM ^c	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	ND	0.0005
TOTAL CHROMIUM ^c	mg/L Cr	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005
ZINC ^c	mg/L Zn	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
MICROBIOLOGY				
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	110	1.8
SAMPLE CONDITION				
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

ND : NON-DETECTABLE.

Benjawan V.

(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

MARCH 4, 2022

ANALYSIS REPORT

CUSTOMER NAME : PAN ORIENT ENERGY (SIAM) LIMITED
ADDRESS : 555 RASA TOWER II 17TH FLOOR UNIT 1702 PHAHONYOTHIN ROAD, CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com
SAMPLING SOURCE : L53B-S4 (UTM WGS 84 ZONE 47P 597938E 1553761N)
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : FEBRUARY 16, 2022
SAMPLING TIME : 13:05 HOUR
SAMPLING METHOD ° : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY ° : MR KRIDSANAPONG NAMTHIP
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : FEBRUARY 17, 2022
ANALYTICAL DATE : FEBRUARY 17 - MARCH 3, 2022
REPORT NO. : 2022-U015573
WORK NO. : 2022-000520
ANALYSIS NO. : T22AC810-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			L53B-S4 T22AC810-0004	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	8.2 (28°C)	-
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	28	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	171 (29°C)	0.1
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O C)	5.3	0.5
SALINITY °	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	0.1	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	1.2	1.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	25.0	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	125	25
TOTAL PETROLEUM HYDROCARBONS °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D AND 5520 F)	ND	3
METALS				
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0043	0.0003
BARIUM °	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.034	0.003
CADMIUM °	mg/L Cd	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.002
IRON °	mg/L Fe	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	1.07	0.005
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
MANGANESE °	mg/L Mn	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	0.068	0.002
MERCURY °	mg/L Hg	IN-HOUSE METHOD: UAE.TP.HEM.002 (COLD VAPOUR ATOMIC ABSORPTION SPECTROMETRIC METHOD); SM: 3112 B	ND	0.0001
NICKEL °	mg/L Ni	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			L53B-S4 T22AC810-0004	
SELENIUM ^c	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	ND	0.0005
TOTAL CHROMIUM ^c	mg/L Cr	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005
ZINC ^c	mg/L Zn	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
MICROBIOLOGY				
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	170	1.8
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
SEDIMENT			BROWN	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

ND : NON-DETECTABLE.

Benjawan V.

(MISS BENJAWAN VIRIYOTHAJ)
LABORATORY SUPERVISOR

MARCH 4, 2022

คุณภาพน้ำใต้ดิน



ANALYSIS REPORT

CUSTOMER NAME : PAN ORIENT ENERGY (SIAM) LIMITED
ADDRESS : 555 RASA TOWER II 17TH FLOOR UNIT 1702 PHAHONYOTHIN ROAD, CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com
SAMPLING SOURCE : L53B-G1 (UP GRADIENT) (UTM WGS 84 ZONE 47P 597505E 1555245N)
SAMPLE TYPE : GROUNDWATER
SAMPLING DATE : FEBRUARY 16, 2022
SAMPLING TIME : 14:00 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR KRIDSANAPONG NAMTHIP
ANALYZED BY : MISS NADNAPA KAMOLBOON

RECEIVED DATE : FEBRUARY 17, 2022
ANALYTICAL DATE : FEBRUARY 17 - MARCH 3, 2022
REPORT NO. : 2022-U015580
WORK NO. : 2022-000520
ANALYSIS NO. : T22AC811-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			L53B-G1 (UP GRADIENT) T22AC811-0001	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.9 (31°C)	-
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	31	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	865 (31°C)	0.1
SALINITY °	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	0.6	0.1
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	763	25
CHLORIDE °	mg/L Cl ⁻	ARGENTOMETRIC METHOD (SM: 4500-Cl° B)	93.2	2.0
SULPHATE °	mg/L SO ₄ ²⁻	TURBIDIMETRIC METHOD (SM: 4500-SO ₄ ²⁻ E)	74.3	0.3
TOTAL PETROLEUM HYDROCARBONS °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D AND 5520 F)	ND	3
METALS				
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0024	0.0003
BARIUM °	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.056	0.003
CADMIUM °	mg/L Cd	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.002
CALCIUM °	mg/L Ca	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	15.1	0.005
COPPER °	mg/L Cu	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.002
IRON °	mg/L Fe	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	< LOQ	0.005
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
MANGANESE °	mg/L Mn	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	< LOQ	0.002
NICKEL °	mg/L Ni	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			L53B-G1 (UP GRADIENT) T22AC811-0001	
POTASSIUM ^c	mg/L K	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	3.16	0.005
SELENIUM ^c	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	ND	0.0005
TOTAL CHROMIUM ^c	mg/L Cr	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005
TOTAL MERCURY ^b	mg/L Hg	IN-HOUSE METHOD: UAE.TP.HEM.002 (COLD VAPOUR ATOMIC ABSORPTION SPECTROMETRIC METHOD); SM: 3112 B	< LOQ	0.0001
ZINC ^c	mg/L Zn	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
SODIUM ^c	mg/L Na	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	97.8	0.005
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

ND : NON-DETECTABLE.

< LOQ : < LEVEL OF QUANTITATION (IRON ≥ 0.005 AND < 0.050 mg/L, MANGANESE ≥ 0.002 AND < 0.025 mg/L,
TOTAL MERCURY ≥ 0.0001 AND < 0.0005 mg/L).

Benjawan V.

(MISS BENJAWAN VIRIYOTHA)
LABORATORY SUPERVISOR

MARCH 4, 2022

ANALYSIS REPORT

CUSTOMER NAME : PAN ORIENT ENERGY (SIAM) LIMITED
ADDRESS : 555 RASA TOWER II 17TH FLOOR UNIT 1702 PHAHONYOTHIN ROAD, CHATUCHAK CHATUCHAK BANGKOK 10900
CONTACT INFORMATION : TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com
SAMPLING SOURCE : L53B-G2 (UP GRADIENT) (UTM WGS 84 ZONE 47P 598560E 1555026N)
SAMPLE TYPE : GROUNDWATER
SAMPLING DATE : FEBRUARY 16, 2022
SAMPLING TIME : 13:50 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR KRIDSANAPONG NAMTHIP
ANALYZED BY : MISS NADNAPA KAMOLBOON

RECEIVED DATE : FEBRUARY 17, 2022
ANALYTICAL DATE : FEBRUARY 17 - MARCH 3, 2022
REPORT NO. : 2022-U015581
WORK NO. : 2022-000520
ANALYSIS NO. : T22AC811-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			L53B-G2 (UP GRADIENT) T22AC811-0002	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	8.1 (29°C)	-
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	29	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	766 (29°C)	0.1
SALINITY °	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	0.6	0.1
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	652	25
CHLORIDE °	mg/L Cl ⁻	ARGENTOMETRIC METHOD (SM: 4500-Cl° B)	61.2	2.0
SULPHATE °	mg/L SO ₄ ²⁻	TURBIDIMETRIC METHOD (SM: 4500-SO ₄ ²⁻ E)	90.1	0.3
TOTAL PETROLEUM HYDROCARBONS °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D AND 5520 F)	ND	3
METALS				
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0006	0.0003
BARIUM °	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.061	0.003
CADMIUM °	mg/L Cd	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.002
CALCIUM °	mg/L Ca	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	34.8	0.005
COPPER °	mg/L Cu	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	< LOQ	0.002
IRON °	mg/L Fe	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	0.099	0.005
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
MANGANESE °	mg/L Mn	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	0.034	0.002
NICKEL °	mg/L Ni	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			L53B-G2 (UP GRADIENT) T22AC811-0002	
POTASSIUM ^c	mg/L K	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	1.30	0.005
SELENIUM ^c	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0008	0.0005
TOTAL CHROMIUM ^c	mg/L Cr	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005
TOTAL MERCURY ^b	mg/L Hg	IN-HOUSE METHOD: UAE.TP.HEM.002 (COLD VAPOUR ATOMIC ABSORPTION SPECTROMETRIC METHOD); SM: 3112 B	< LOQ	0.0001
ZINC ^c	mg/L Zn	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	0.035	0.003
SODIUM ^c	mg/L Na	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	62.0	0.005
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

ND : NON-DETECTABLE.

< LOQ : < LEVEL OF QUANTITATION (COPPER ≥ 0.002 AND < 0.025 mg/L, TOTAL MERCURY ≥ 0.0001 AND < 0.0005 mg/L).

Benjawan V.

(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

MARCH 4, 2022

ANALYSIS REPORT

CUSTOMER NAME	: PAN ORIENT ENERGY (SIAM) LIMITED	RECEIVED DATE	: FEBRUARY 18, 2022
ADDRESS	: 555 RASA TOWER II 17TH FLOOR UNIT 1702 PHAHONYOTHIN ROAD, CHATUCHAK CHATUCHAK BANGKOK 10900	ANALYTICAL DATE	: FEBRUARY 18-MARCH 4, 2022
CONTACT INFORMATION	: TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com	REPORT NO.	: 2022-U016036
SAMPLING SOURCE	: L53B-G3 (DOWN GRADIENT) (UTM WGS 84 ZONE 47P 597961E 1554573N)	WORK NO.	: 2022-000520
SAMPLE TYPE	: GROUNDWATER	ANALYSIS NO.	: T22AC961-0001
SAMPLING DATE	: FEBRUARY 17, 2022		
SAMPLING TIME	: 09:50 HOUR		
SAMPLING METHOD °	: SUBMERSIBLE PUMP		
SAMPLING BY °	: MR KRIDSANAPONG NAMTHIP		
ANALYZED BY	: MISS KEWALEE SUKHAREE		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			L53B-G3 (DOWN GRADIENT) T22AC961-0001	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.7 (30°C)	-
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	30	-
SALINITY °	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	0.7	0.1
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	870 (30°C)	0.1
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	603	25
CHLORIDE °	mg/L Cl ⁻	ARGENTOMETRIC METHOD (SM: 4500-Cl° B)	68.5	2.0
SULPHATE °	mg/L SO ₄ ²⁻	TURBIDIMETRIC METHOD (SM: 4500-SO ₄ ²⁻ E)	76.4	0.3
TOTAL PETROLEUM HYDROCARBONS °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D AND 5520 F)	ND	3
METALS				
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0045	0.0003
BARIUM °	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.039	0.003
CADMIUM °	mg/L Cd	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.002
CALCIUM °	mg/L Ca	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	31.8	0.005
COPPER °	mg/L Cu	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.002
IRON °	mg/L Fe	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	0.302	0.005
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	< LOQ	0.003
MANGANESE °	mg/L Mn	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	0.187	0.002
NICKEL °	mg/L Ni	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			L53B-G3 (DOWN GRADIENT) T22AC961-0001	
POTASSIUM ^c	mg/L K	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	1.80	0.005
SELENIUM ^c	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0011	0.0005
TOTAL CHROMIUM ^c	mg/L Cr	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005
TOTAL MERCURY ^b	mg/L Hg	IN-HOUSE METHOD: UAE.TP.HEM.002 (COLD VAPOUR ATOMIC ABSORPTION SPECTROMETRIC METHOD); SM: 3112 B	< LOQ	0.0001
ZINC ^c	mg/L Zn	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
SODIUM ^c	mg/L Na	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	79.8	0.005
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR	
SEDIMENT			BROWN	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

ND : NON-DETECTABLE.

< LOQ : < LEVEL OF QUANTITATION (LEAD ≥ 0.003 AND < 0.100 mg/L, TOTAL MERCURY ≥ 0.0001 AND < 0.0005 mg/L).

Benjawan V.

(MISS BENJAWAN VIRIYOTHAJ)
LABORATORY SUPERVISOR

MARCH 7, 2022

ANALYSIS REPORT

CUSTOMER NAME	: PAN ORIENT ENERGY (SIAM) LIMITED	RECEIVED DATE	: FEBRUARY 17, 2022
ADDRESS	: 555 RASA TOWER II 17TH FLOOR UNIT 1702 PHAHONYOTHIN ROAD, CHATUCHAK CHATUCHAK BANGKOK 10900	ANALYTICAL DATE	: FEBRUARY 17 - MARCH 3, 2022
CONTACT INFORMATION	: TEL : 0 2937 1138-40 e-mail : prakaipruek@poesiam.com	REPORT NO.	: 2022-U015582
SAMPLING SOURCE	: L53B-G4 (DOWN GRADIENT) (UTM WGS 84 ZONE 47P 597827E 1554293N)	WORK NO.	: 2022-000520
SAMPLE TYPE	: GROUNDWATER	ANALYSIS NO.	: T22AC811-0003
SAMPLING DATE	: FEBRUARY 16, 2022		
SAMPLING TIME	: 13:35 HOUR		
SAMPLING METHOD °	: GRAB		
SAMPLING BY °	: MR KRIDSANAPONG NAMTHIP		
ANALYZED BY	: MISS NADNAPA KAMOLBOON		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			L53B-G4 (DOWN GRADIENT) T22AC811-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H* B)	8.0 (28°C)	-
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	28	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	523 (28°C)	0.1
SALINITY °	ppt	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2520 B)	0.4	0.1
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	452	25
CHLORIDE °	mg/L Cl ⁻	ARGENTOMETRIC METHOD (SM: 4500-Cl B)	15.7	2.0
SULPHATE °	mg/L SO ₄ ²⁻	TURBIDIMETRIC METHOD (SM: 4500-SO ₄ ²⁻ E)	28.8	0.3
TOTAL PETROLEUM HYDROCARBONS °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D AND 5520 F)	ND	3
METALS				
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0021	0.0003
BARIUM °	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.021	0.003
CADMIUM °	mg/L Cd	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.002
CALCIUM °	mg/L Ca	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	24.9	0.005
COPPER °	mg/L Cu	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.002
IRON °	mg/L Fe	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	< LOQ	0.005
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
MANGANESE °	mg/L Mn	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	0.070	0.002
NICKEL °	mg/L Ni	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			L53B-G4 (DOWN GRADIENT) T22AC811-0003	
POTASSIUM ^c	mg/L K	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.662	0.005
SELENIUM ^c	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	ND	0.0005
TOTAL CHROMIUM ^c	mg/L Cr	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.005
TOTAL MERCURY ^b	mg/L Hg	IN-HOUSE METHOD: UAE.TP.HEM.002 (COLD VAPOUR ATOMIC ABSORPTION SPECTROMETRIC METHOD); SM: 3112 B	< LOQ	0.0001
ZINC ^c	mg/L Zn	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
SODIUM ^c	mg/L Na	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	31.9	0.005
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR	

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

ND : NON-DETECTABLE.

< LOQ : < LEVEL OF QUANTITATION (IRON ≥ 0.005 AND < 0.050 mg/L, TOTAL MERCURY ≥ 0.0001 AND < 0.0005 mg/L).

Benjawan V.

(MISS BENJAWAN VIRIYOTHA)
LABORATORY SUPERVISOR

MARCH 4, 2022