

ภาคผนวก ง.1

ใบรับรองผลการตรวจวิเคราะห์
คุณภาพอากาศจากปล่องระบายอากาศ



บริษัท ซีคอต จำกัด
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพฯ 10800

239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND

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

STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Bangkok Cogeneration Co., Ltd.	REF. NO.	: 225004_Cert-Stack/TSP_Mar 25
	Branch 2 (BCC2)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 03/03/2025
RECEIVED DATE	: 05/03/2025	ANALYTICAL DATE	: 06-10/03/2025
REPORT DATE	: 17/03/2025	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Natural Gas
OPERATOR	: Mr. Pisanu Seenampeng	STACK LOCATION	: HRSG 11

STACK DESCRIPTION

Height	: 40.0	m	Gas Velocity	: 14.7	m/s
Diameter	: 3.30	m	Flow Rate*	: 5,847	Ncu.m/min
Temperature	: 79.2	°C	Excess Oxygen	: 13.4	%

PARAMETER	UNITS	RESULTS*			STANDARDS ^{1/}	REFERENCE
		13.4%O ₂	7%O ₂	7%O ₂		METHODS
Total Suspended Particulate	mg/Ncu.m.	2.12	3.91	60		US. EPA Method 5

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG.NO.2-239-0-0018

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO.2-239-0-0010

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

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

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

4. ^{1/} Notification of the Ministry of Industry, B.E.2549 and the Ministry of Natural Resources and Environment, B.E.2549.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Bangkok Cogeneration Co., Ltd.	REF. NO.	: 225004_Cert-Stack/PM-10_Mar 25
	Branch 2 (BCC2)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 03/03/2025
RECEIVED DATE	: 05/03/2025	ANALYTICAL DATE	: 06-10/03/2025
REPORT DATE	: 17/03/2025	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Natural Gas
OPERATOR	: Mr. Pisanu Seenampeng	STACK LOCATION	: HRSG 11

STACK DESCRIPTION

Height	: 40.0	m	Gas Velocity	: 14.7	m/s
Diameter	: 3.30	m	Flow Rate*	: 5,847	Ncu.m/min
Temperature	: 79.2	°C	Excess Oxygen	: 13.4	%

PARAMETER	UNITS	RESULTS*			STANDARDS	REFERENCE
		13.4%O ₂	7%O ₂	7%O ₂		METHODS
Particulate matter less than 10 microns	mg/Ncu.m.	1.02	1.88	-		US. EPA Method 201A

Pornnapa Budthum

(Miss Pornnapa Budthum)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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

4. - Standard is not specified.

The Monitoring Result of Emission Concentration
HRSG 11
BANGKOK COGENERATION CO., LTD. (Branch 2)
March 3, 2025

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	13.38	13.38	10.42	10.40	19.22
2	13.37	13.35	10.50	10.48	19.29
3	13.39	13.35	10.69	10.67	19.64
Average	13.38	13.36	10.54	10.52	19.39

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	13.38	13.38	0.11	0.09	0.17
2	13.37	13.35	0.30	0.27	0.50
3	13.39	13.35	0.49	0.45	0.83
Average	13.38	13.36	0.30	0.27	0.50

Run Number	Oxygen content (%)		Carbonmonoxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	13.38	13.38	0.57	0.53	0.98
2	13.37	13.35	0.57	0.53	0.98
3	13.39	13.35	0.54	0.50	0.92
Average	13.38	13.36	0.56	0.52	0.96

BANGKOK COGENERATION CO., LTD. (Branch 2)
EMISSION TEST RESULT

Run # : 1
Date: March 3, 2025
Start time: 11:40 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: TELEDYNE 200 EM
SO₂ instrument Model: API 100 AH
CO instrument Model: THERMO 48 C
Fuel Type : Natural Gas

Location : HRSG 11
Finish time : 12:00 PM
Serial No.: 161212-14
Serial No.: 433
Serial No.: 118
Serial No.: 0412106049
Test Operator : Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
11:40 AM	13.38	10.31	0.05	0.50
11:41 AM	13.37	10.59	0.05	0.46
11:42 AM	13.36	10.86	0.03	0.46
11:43 AM	13.38	10.77	0.10	0.60
11:44 AM	13.38	10.41	0.03	0.80
11:45 AM	13.38	10.21	0.04	0.67
11:46 AM	13.38	10.20	0.12	0.60
11:47 AM	13.40	10.21	0.05	0.60
11:48 AM	13.39	10.23	0.09	0.47
11:49 AM	13.38	10.34	0.08	0.60
11:50 AM	13.36	10.60	0.06	0.57
11:51 AM	13.36	10.75	0.10	0.61
11:52 AM	13.38	10.49	0.13	0.61
11:53 AM	13.38	10.11	0.14	0.51
11:54 AM	13.38	10.00	0.12	0.64
11:55 AM	13.36	10.33	0.14	0.64
11:56 AM	13.37	10.61	0.18	0.47
11:57 AM	13.38	10.44	0.17	0.47
11:58 AM	13.37	10.38	0.18	0.51
11:59 AM	13.37	10.52	0.17	0.54
12:00 PM	13.37	10.43	0.19	0.57
Average	13.38	10.42	0.11	0.57

Signature 
 (Miss Katesarin Vorradetwittaya)
 Environmental Scientist

BANGKOK COGENERATION CO., LTD. (Branch 2)

EMISSION TEST RESULT

Run # : 2

Date: March 3, 2025 Location : HRSO 11

Start time: 12:01 PM Finish time: 12:21 PM

O₂ instrument Model: AMI 70 Serial No.: 161212-14

NO_x instrument Model: TELEDYNE 200 EM Serial No.: 433

SO₂ instrument Model: API 100 AH Serial No.: 118

CO instrument Model: THERMO 48 C Serial No.: 0412106049

Fuel Type : Natural Gas Test Operator : Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
12:01 PM	13.41	9.87	0.20	0.64
12:02 PM	13.36	10.57	0.24	0.54
12:03 PM	13.36	10.72	0.24	0.67
12:04 PM	13.37	10.51	0.24	0.67
12:05 PM	13.35	11.06	0.24	0.68
12:06 PM	13.36	10.87	0.29	0.61
12:07 PM	13.37	10.58	0.24	0.48
12:08 PM	13.38	10.26	0.28	0.31
12:09 PM	13.37	10.52	0.31	0.41
12:10 PM	13.35	10.59	0.30	0.48
12:11 PM	13.38	10.24	0.30	0.44
12:12 PM	13.36	10.18	0.28	0.74
12:13 PM	13.37	10.25	0.32	0.74
12:14 PM	13.37	10.81	0.31	0.74
12:15 PM	13.36	10.85	0.36	0.65
12:16 PM	13.41	10.42	0.39	0.48
12:17 PM	13.36	10.38	0.35	0.48
12:18 PM	13.37	10.48	0.36	0.54
12:19 PM	13.37	10.39	0.36	0.68
12:20 PM	13.38	10.41	0.37	0.54
12:21 PM	13.39	10.47	0.42	0.54
Average	13.37	10.50	0.30	0.57

Signature 

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

BANGKOK COGENERATION CO., LTD. (Branch 2)

EMISSION TEST RESULT

Run # : 3

Date: March 3, 2025 Location : HRSO 11

Start time: 12:22 PM Finish time: 12:42 PM

O₂ instrument Model: AMI 70 Serial No.: 161212-14

NO_x instrument Model: TELEDYNE 200 EM Serial No.: 433

SO₂ instrument Model: API 100 AH Serial No.: 118

CO instrument Model: THERMO 48 C Serial No.: 0412106049

Fuel Type : Natural Gas Test Operator : Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
12:22 PM	13.38	10.41	0.38	0.48
12:23 PM	13.39	10.41	0.41	0.51
12:24 PM	13.37	10.53	0.46	0.58
12:25 PM	13.37	10.45	0.46	0.68
12:26 PM	13.40	10.09	0.42	0.59
12:27 PM	13.38	10.28	0.39	0.51
12:28 PM	13.43	10.17	0.42	0.44
12:29 PM	13.37	10.94	0.44	0.66
12:30 PM	13.38	10.53	0.44	0.68
12:31 PM	13.40	10.27	0.44	0.56
12:32 PM	13.39	10.37	0.49	0.55
12:33 PM	13.37	10.67	0.53	0.63
12:34 PM	13.40	10.83	0.52	0.51
12:35 PM	13.38	10.97	0.52	0.33
12:36 PM	13.40	11.18	0.51	0.48
12:37 PM	13.43	11.10	0.54	0.48
12:38 PM	13.39	11.15	0.56	0.58
12:39 PM	13.40	11.38	0.54	0.48
12:40 PM	13.38	11.24	0.57	0.50
12:41 PM	13.40	10.85	0.60	0.50
12:42 PM	13.39	10.69	0.59	0.56
Average	13.39	10.69	0.49	0.54

Signature 

(Miss Katesarin Vorradetwittaya)

Environmental Scientist



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Bangkok Cogeneration Co., Ltd.	REF. NO.	: 225004_Cert-Stack/TSP_Mar 25
	Branch 2 (BCC2)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 03/03/2025
RECEIVED DATE	: 05/03/2025	ANALYTICAL DATE	: 06-10/03/2025
REPORT DATE	: 17/03/2025	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Natural Gas
OPERATOR	: Mr. Pisanu Seenampeng	STACK LOCATION	: HRSG 12

STACK DESCRIPTION					
Height	: 40.0	m	Gas Velocity	: 14.8	m/s
Diameter	: 3.30	m	Flow Rate*	: 5,818	Ncu.m/min
Temperature	: 80.9	°C	Excess Oxygen	: 12.8	%

PARAMETER	UNITS	RESULTS*		STANDARDS ^{1/}	REFERENCE
		12.8%O ₂	7%O ₂	7%O ₂	
Total Suspended Particulate	mg/Ncu.m.	2.30	3.96	60	US. EPA Method 5

Pornapa Budthum

(Miss Pornnapa Budthum)

Analyst

REG.NO. 2-239-ก-0018

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO. 2-239-ก-0010

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

4. ^{1/} Notification of the Ministry of Industry, B.E.2549 and the Ministry of Natural Resources and Environment, B.E.2549.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME	: Bangkok Cogeneration Co., Ltd.	REF. NO.	: 225004_Cert-Stack/PM-10_Mar 25
	Branch 2 (BCC2)		
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING DATE	: 03/03/2025
RECEIVED DATE	: 05/03/2025	ANALYTICAL DATE	: 06-10/03/2025
REPORT DATE	: 17/03/2025	SAMPLE CONDITION	: Normal
SOURCE DESCRIPTION	: Combustion	FUEL TYPE	: Natural Gas
OPERATOR	: Mr. Pisanu Seenampeng	STACK LOCATION	: HRSG 12

STACK DESCRIPTION					
Height	: 40.0	m	Gas Velocity	: 14.8	m/s
Diameter	: 3.30	m	Flow Rate*	: 5,818	Ncu.m/min
Temperature	: 80.9	°C	Excess Oxygen	: 12.8	%

PARAMETER	UNITS	RESULTS*		STANDARDS	REFERENCE
		12.8%O ₂	7%O ₂	7%O ₂	
Particulate matter less than 10 microns	mg/Ncu.m.	1.11	1.91	-	US. EPA Method 201A

Pornapa Budthum

(Miss Pornnapa Budthum)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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4. - Standard is not specified.

The Monitoring Result of Emission Concentration
HRSG 12
BANGKOK COGENERATION CO., LTD. (Branch 2)
March 3, 2025

Run Number	Oxygen content (%)		Oxide of Nitrogen (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	12.82	12.80	8.81	8.78	15.07
2	12.84	12.82	8.18	8.15	14.02
3	12.87	12.84	7.65	7.62	13.14
Average	12.84	12.82	8.21	8.18	14.08

Run Number	Oxygen content (%)		Sulfur dioxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	12.82	12.80	0.10	0.07	0.12
2	12.84	12.82	0.10	0.07	0.12
3	12.87	12.84	0.10	0.07	0.12
Average	12.84	12.82	0.10	0.07	0.12

Run Number	Oxygen content (%)		Carbonmonoxide (ppm)		
	RM Stack Gas Conc	Corrected Gas Conc	RM Stack Gas Conc	Corrected Gas Conc @Actual O2	Corrected Gas Conc @7% O2
1	12.82	12.80	0.22	0.17	0.29
2	12.84	12.82	0.28	0.23	0.40
3	12.87	12.84	0.43	0.39	0.67
Average	12.84	12.82	0.31	0.26	0.45

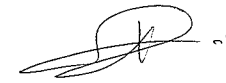
BANGKOK COGENERATION CO., LTD. (Branch 2)
EMISSION TEST RESULT

Run # : 1
Date: March 3, 2025
Start time: 11:40 AM
O₂ instrument Model: AMI 70
NO_x instrument Model: TELEDYNE 200 EM
SO₂ instrument Model: API 100 AH
CO instrument Model: THERMO 48 C
Fuel Type : Natural Gas

Location : HRSG 12
Finish time : 12:00 PM
Serial No.: 121121-10
Serial No.: 441
Serial No.: 060
Serial No.: 35
Test Operator : Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
11:40 AM	12.78	9.03	0.10	0.21
11:41 AM	12.77	9.13	0.10	0.19
11:42 AM	12.78	9.36	0.10	0.23
11:43 AM	12.85	9.43	0.00	0.32
11:44 AM	12.77	9.14	0.10	0.20
11:45 AM	12.82	9.02	0.10	0.21
11:46 AM	12.86	8.86	0.10	0.20
11:47 AM	12.87	8.74	0.10	0.20
11:48 AM	12.82	8.71	0.10	0.23
11:49 AM	12.81	8.74	0.10	0.19
11:50 AM	12.77	8.71	0.10	0.27
11:51 AM	12.84	8.75	0.10	0.22
11:52 AM	12.87	8.68	0.10	0.27
11:53 AM	12.86	8.69	0.10	0.25
11:54 AM	12.79	8.53	0.10	0.20
11:55 AM	12.83	8.57	0.10	0.19
11:56 AM	12.87	8.70	0.10	0.22
11:57 AM	12.84	8.62	0.10	0.25
11:58 AM	12.80	8.51	0.10	0.22
11:59 AM	12.83	8.56	0.10	0.23
12:00 PM	12.84	8.46	0.10	0.21
Average	12.82	8.81	0.10	0.22

Signature



(Miss Katesarin Vorradetwittaya)

Environmental Scientist

BANGKOK COGENERATION CO., LTD. (Branch 2)

EMISSION TEST RESULT

Run # : 2

Date: March 3, 2025

Location : HRS 12

Start time: 12:01 PM

Finish time : 12:21 PM

O₂ instrument Model: AMI 70

Serial No.: 121121-10

NO_x instrument Model: TELEDYNE 200 EM

Serial No.: 441

SO₂ instrument Model: API 100 AH

Serial No.: 060

CO instrument Model: THERMO 48 C

Serial No.: 35

Fuel Type : Natural Gas

Test Operator : Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
12:01 PM	12.85	8.27	0.10	0.25
12:02 PM	12.77	8.16	0.10	0.23
12:03 PM	12.85	8.41	0.10	0.29
12:04 PM	12.80	8.34	0.10	0.34
12:05 PM	12.77	8.38	0.10	0.23
12:06 PM	12.77	8.57	0.10	0.23
12:07 PM	12.86	8.50	0.10	0.14
12:08 PM	12.87	8.26	0.10	0.20
12:09 PM	12.79	8.29	0.10	0.21
12:10 PM	12.86	8.37	0.10	0.30
12:11 PM	12.87	8.26	0.10	0.34
12:12 PM	12.87	8.08	0.10	0.30
12:13 PM	12.84	8.00	0.10	0.30
12:14 PM	12.82	8.01	0.10	0.32
12:15 PM	12.87	8.12	0.10	0.37
12:16 PM	12.87	8.25	0.10	0.30
12:17 PM	12.86	7.96	0.10	0.30
12:18 PM	12.87	7.96	0.10	0.30
12:19 PM	12.87	7.95	0.10	0.34
12:20 PM	12.87	7.87	0.10	0.35
12:21 PM	12.87	7.77	0.10	0.34
Average	12.84	8.18	0.10	0.28

Signature



(Miss Katesarin Vorradetwittaya)

Environmental Scientist

BANGKOK COGENERATION CO., LTD. (Branch 2)

EMISSION TEST RESULT

Run # : 3

Date: March 3, 2025

Location : HRS 12

Start time: 12:22 PM

Finish time : 12:42 PM

O₂ instrument Model: AMI 70

Serial No.: 121121-10

NO_x instrument Model: TELEDYNE 200 EM

Serial No.: 441

SO₂ instrument Model: API 100 AH

Serial No.: 060

CO instrument Model: THERMO 48 C

Serial No.: 35

Fuel Type : Natural Gas

Test Operator : Pisanu S.

Time, min	O ₂ (%)	NO _x (ppm)	SO ₂ (ppm)	CO (ppm)
12:22 PM	12.87	7.71	0.10	0.39
12:23 PM	12.87	7.79	0.10	0.44
12:24 PM	12.87	7.89	0.10	0.44
12:25 PM	12.87	7.93	0.10	0.44
12:26 PM	12.87	7.68	0.10	0.35
12:27 PM	12.87	7.52	0.10	0.41
12:28 PM	12.87	7.67	0.10	0.42
12:29 PM	12.85	7.55	0.10	0.51
12:30 PM	12.87	7.67	0.10	0.54
12:31 PM	12.87	7.73	0.10	0.40
12:32 PM	12.85	7.48	0.10	0.40
12:33 PM	12.87	7.47	0.10	0.52
12:34 PM	12.87	7.69	0.10	0.40
12:35 PM	12.87	7.59	0.10	0.41
12:36 PM	12.87	7.65	0.10	0.36
12:37 PM	12.87	7.77	0.10	0.41
12:38 PM	12.87	7.69	0.10	0.47
12:39 PM	12.87	7.66	0.10	0.42
12:40 PM	12.87	7.67	0.10	0.47
12:41 PM	12.87	7.51	0.10	0.42
12:42 PM	12.87	7.36	0.10	0.37
Average	12.87	7.65	0.10	0.43

Signature



(Miss Katesarin Vorradetwittaya)

Environmental Scientist

ภาคผนวก ง.2

ใบรับรองผลการตรวจวิเคราะห์
คุณภาพอากาศในบรรยากาศทั่วไป



บริษัท ซีคอต จำกัด
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพฯ 10800

239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND

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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : Bangkok Cogeneration Co., Ltd. REFERENCE NO. : 225004 Amb (Cert.)/TSP/Mar 2025
(BCC2) SAMPLING DATE : 03-10/03/2025
SAMPLING BY : SECOT Co., Ltd. ANALYTICAL DATE : 14-18/03/2025
RECEIVED DATE : 13/03/2025 SAMPLE CONDITION : Normal
REPORT DATE : 21/03/2025 SITE OPERATOR : Mr. Siwanon Kulawong

LOCATION DESCRIPTION : 1. Wat Map Chalute
2. Wat Sophon Wanaram
3. Ban Plong Community
4. Wat Nong Feab

PARAMETER	SAMPLING DATE	UNITS	RESULTS				STANDARD*	REFERENCE METHODS
			1	2	3	4		
TSP (24 hr)	03-04/03/2025	mg/m ³	0.044	0.075	0.082	0.049	0.330	High Volume Air
	04-05/03/2025	mg/m ³	0.036	0.051	0.102	0.031		Sampler/Gravimetric
	05-06/03/2025	mg/m ³	0.031	0.066	0.110	0.036		Method
	06-07/03/2025	mg/m ³	0.033	0.046	0.098	0.043		
	07-08/03/2025	mg/m ³	0.046	0.042	0.082	0.040		
	08-09/03/2025	mg/m ³	0.051	0.075	0.090	0.053		
	09-10/03/2025	mg/m ³	0.065	0.107	0.136	0.079		

Rongpa Pothum

(Miss Pornnapa Budthum)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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

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

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



บริษัท ซีคอต จำกัด
SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพฯ 10800

239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND

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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : Bangkok Cogeneration Co., Ltd. REFERENCE NO. : 225004 Amb (Cert.)/PM-10/Mar 2025
(BCC2) SAMPLING DATE : 03-10/03/2025
SAMPLING BY : SECOT Co., Ltd. ANALYTICAL DATE : 14-18/03/2025
RECEIVED DATE : 13/03/2025 SAMPLE CONDITION : Normal
REPORT DATE : 21/03/2025 SITE OPERATOR : Mr. Siwanon Kulawong

LOCATION DESCRIPTION : 1. Wat Map Chalute
2. Wat Sophon Wanaram
3. Ban Plong Community
4. Wat Nong Feab

PARAMETER	SAMPLING DATE	UNITS	RESULTS				STANDARD*	REFERENCE METHODS
			1	2	3	4		
PM-10 (24 hr)	03-04/03/2025	mg/m ³	0.017	0.036	0.036	0.020	0.120	High Volume Air Sampler
	04-05/03/2025	mg/m ³	0.011	0.028	0.027	0.010		(Hi-Vol PM-10 Size
	05-06/03/2025	mg/m ³	0.015	0.031	0.029	0.014		Selective Inlet)/
	06-07/03/2025	mg/m ³	0.014	0.025	0.027	0.014		Gravimetric Method
	07-08/03/2025	mg/m ³	0.023	0.030	0.030	0.016		
	08-09/03/2025	mg/m ³	0.030	0.035	0.039	0.023		
	09-10/03/2025	mg/m ³	0.042	0.042	0.064	0.044		

Rongpa Pothum

(Miss Pornnapa Budthum)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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

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



Meteorological Monitoring Results : Wind Rose

MTR-BCC2

Location : Ban Plong Community

Monitor period : 03-10 Mar 2025

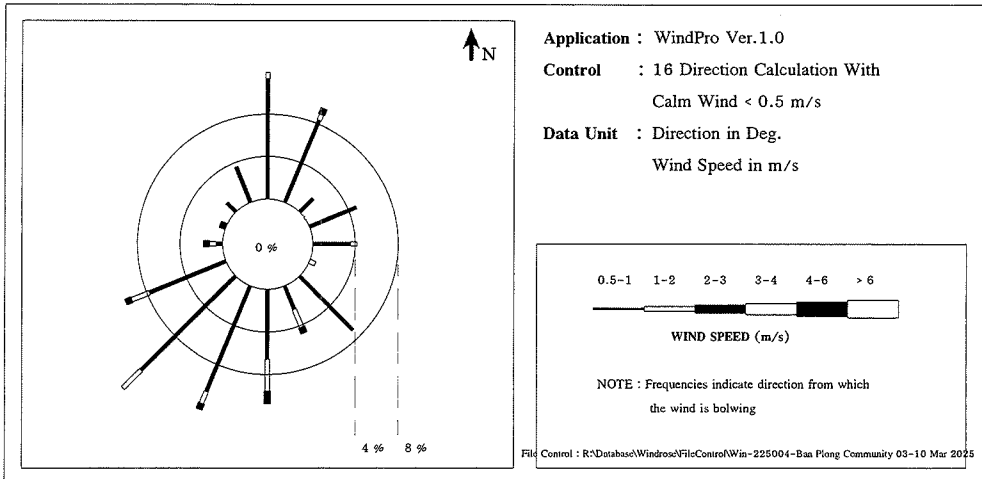
Wind Speed Model : Novalynx WS-25

Serial No : A5086

Wind Direction Model : Novalynx WS-25

Serial No : A5086

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	Total
N	0.1131	0.0060	0.0000	0.0000	0.0000	0.0000	0.1190
NNE	0.0833	0.0060	0.0060	0.0000	0.0000	0.0000	0.0952
NE	0.0179	0.0000	0.0000	0.0000	0.0000	0.0000	0.0179
ENE	0.0476	0.0000	0.0000	0.0000	0.0000	0.0000	0.0476
E	0.0357	0.0060	0.0000	0.0000	0.0000	0.0000	0.0417
ESE	0.0000	0.0060	0.0000	0.0000	0.0000	0.0000	0.0060
SE	0.0714	0.0000	0.0000	0.0000	0.0000	0.0000	0.0714
SSE	0.0238	0.0179	0.0060	0.0000	0.0000	0.0000	0.0476
S	0.0655	0.0298	0.0119	0.0000	0.0000	0.0000	0.1071
SSW	0.1071	0.0119	0.0060	0.0000	0.0000	0.0000	0.1250
SW	0.1250	0.0238	0.0000	0.0000	0.0000	0.0000	0.1488
WSW	0.0774	0.0179	0.0060	0.0000	0.0000	0.0000	0.1012
W	0.0060	0.0060	0.0060	0.0000	0.0000	0.0000	0.0179
WNW	0.0000	0.0000	0.0060	0.0000	0.0000	0.0000	0.0060
NW	0.0119	0.0000	0.0000	0.0000	0.0000	0.0000	0.0119
NNW	0.0357	0.0000	0.0000	0.0000	0.0000	0.0000	0.0357
CALM	0.0000						



(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose

MTR-BCC2

Location : Ban Plong Community

Monitor period : 03-10 Mar 2025

Wind Speed Model : Novalynx WS-25

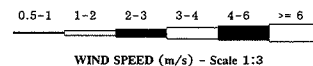
Serial No : A5086

Wind Direction Model : Novalynx WS-25

Serial No : A5086

Time	03-04 Mar 2025		04-05 Mar 2025		05-06 Mar 2025		06-07 Mar 2025	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
13:00 - 14:00	0.7	WSW	0.6	WSW	0.6	WSW	0.5	WSW
14:00 - 15:00	0.6	SW	0.6	WSW	0.5	WSW	1.8	SSE
15:00 - 16:00	0.9	SE	0.5	SW	0.5	SSW	1.5	SSW
16:00 - 17:00	1.2	WSW	0.5	SW	0.7	SW	0.7	WSW
17:00 - 18:00	0.6	SSW	0.7	SSW	0.6	SSW	0.7	SW
18:00 - 19:00	0.5	SW	0.6	SW	0.5	SSW	0.7	SW
19:00 - 20:00	0.5	SW	0.5	WSW	1.8	S	0.6	S
20:00 - 21:00	0.5	WSW	0.5	SW	0.7	S	0.7	S
21:00 - 22:00	0.5	SW	0.6	SW	0.6	S	0.5	SSE
22:00 - 23:00	0.5	SSW	0.7	SSW	2.5	S	0.7	S
23:00 - 24:00	0.6	SW	0.5	SSW	0.6	SE	2.2	S
00:00 - 01:00	1.1	S	0.7	WSW	0.7	S	0.6	S
01:00 - 02:00	2.4	W	0.7	SW	0.5	SE	0.6	SSW
02:00 - 03:00	1.1	SW	0.6	SW	0.6	S	1.1	S
03:00 - 04:00	0.5	SSW	1.9	SSE	0.6	S	0.6	SE
04:00 - 05:00	0.7	SSW	0.5	SE	0.7	S	1.9	S
05:00 - 06:00	0.7	WSW	0.5	SE	0.7	SSW	0.7	SSW
06:00 - 07:00	0.5	WSW	0.5	SSE	1.4	S	0.9	SSE
07:00 - 08:00	0.6	WSW	0.5	SE	1.6	SW	1.9	WSW
08:00 - 09:00	0.6	SSW	1.5	SSW	0.6	SSW	1.5	SSE
09:00 - 10:00	0.9	SE	0.7	SSW	0.7	SSW	0.7	SE
10:00 - 11:00	0.7	SE	2.1	SSE	1.0	ESE	1.3	SW
11:00 - 12:00	1.9	WSW	1.5	SW	2.2	SSW	0.5	SW
12:00 - 13:00	0.5	SW	0.6	SW	0.5	SW	0.7	SW

Wind Rose



File Control : R:\Database\Windrose\FileControl\Win-225004-Ban Plong Community 03-10 Mar 2025

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



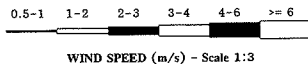
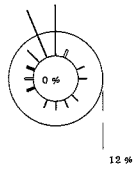
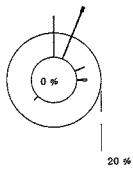
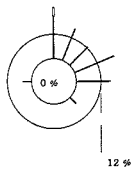
Meteorological Monitoring Results : Wind Rose

MTR-BCC2

Location : Ban Plong Community	Monitor period : 03-10 Mar 2025
Wind Speed Model : Novalynx WS-25	Serial No : A5086
Wind Direction Model : Novalynx WS-25	Serial No : A5086

Time	07-08 Mar 2025		08-09 Mar 2025		09-10 Mar 2025		
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	
13:00 - 14:00	0.7	W	1.4	E	0.6	S	
14:00 - 15:00	0.8	SE	0.7	N	0.6	SSW	
15:00 - 16:00	1.3	N	2.1	NNE	2.5	WNW	
16:00 - 17:00	0.7	N	0.6	N	2.0	WSW	
17:00 - 18:00	0.5	NNE	0.6	ENE	1.7	W	
18:00 - 19:00	0.7	ENE	0.5	NNE	0.6	NW	
19:00 - 20:00	0.6	NE	0.7	NNE	0.6	NW	
20:00 - 21:00	0.5	ENE	0.7	N	0.6	NNW	
21:00 - 22:00	0.5	N	0.7	N	0.7	NNW	
22:00 - 23:00	0.5	ENE	0.5	NNE	0.7	NNW	
23:00 - 24:00	0.5	E	0.7	NNE	0.7	NNW	
00:00 - 01:00	0.5	NNE	0.5	NNE	0.6	NNW	
01:00 - 02:00	0.7	ENE	0.5	NNE	0.6	NNW	
02:00 - 03:00	0.6	NNE	0.5	NNE	0.7	N	
03:00 - 04:00	0.7	N	0.7	NNE	0.7	N	
04:00 - 05:00	0.5	ENE	0.6	N	0.7	N	
05:00 - 06:00	0.5	N	0.5	ENE	0.5	N	
06:00 - 07:00	0.6	NE	0.5	N	0.7	N	
07:00 - 08:00	0.7	E	0.7	N	1.2	NNE	
08:00 - 09:00	0.6	E	0.5	NNE	0.6	N	
09:00 - 10:00	0.5	E	0.6	NNE	0.7	ENE	
10:00 - 11:00	0.6	N	0.5	N	0.5	E	
11:00 - 12:00	0.5	NNE	0.7	E	0.9	SE	
12:00 - 13:00	0.6	NE	0.8	SW	0.6	SSE	

Wind Rose



File Control :R:\Database\Windrose\FileControl\Win-225004-Ban Plong Community 03-10 Mar 2025

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide

MTR-BCC2

Location : Wat Map Chalute	Monitor Period : 03-10 Mar 2025
Analyzer Model : Thermo 42C	Station No : SS2-09
Serial No : 0426708263	Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E	Serial No : 587
Calibration Gas Cylinder I.D.: EB0102326	
Certified Date : 10 Jan 2025	Cal Concentration (ppb) : 0,100,200,400
Expire Date : 09 Jan 2026	

Time	NO2 Concentration (ppm)						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
12:00 - 13:00	0.0075	0.0084	0.0057	0.0076	0.0069	0.0022	0.0007
13:00 - 14:00	0.0054	0.0078	0.0070	0.0046	0.0080	0.0006	0.0006
14:00 - 15:00	0.0077	0.0051	0.0059	0.0081	0.0013	0.0079	0.0006
15:00 - 16:00	0.0078	0.0045	0.0053	0.0001	0.0119	0.0058	0.0076
16:00 - 17:00	0.0075	0.0069	0.0007	0.0107	0.0102	0.0052	0.0066
17:00 - 18:00	0.0070	0.0016	0.0070	0.0133	0.0190	0.0075	0.0128
18:00 - 19:00	0.0015	0.0081	0.0058	0.0099	0.0130	0.0119	0.0108
19:00 - 20:00	0.0077	0.0074	0.0044	0.0117	0.0116	0.0098	0.0114
20:00 - 21:00	0.0066	0.0049	0.0073	0.0125	0.0138	0.0122	0.0126
21:00 - 22:00	0.0081	0.0048	0.0048	0.0110	0.0105	0.0138	0.0054
22:00 - 23:00	0.0109	0.0036	0.0118	0.0127	0.0135	0.0113	0.0083
23:00 - 00:00	0.0120	0.0043	0.0074	0.0054	0.0097	0.0058	0.0107
00:00 - 01:00	0.0093	0.0110	0.0117	0.0047	0.0129	0.0109	0.0048
01:00 - 02:00	0.0040	0.0026	0.0018	0.0037	0.0018	0.0004	0.0038
02:00 - 03:00	0.0057	0.0081	0.0064	0.0108	0.0140	0.0043	0.0039
03:00 - 04:00	0.0139	0.0082	0.0111	0.0079	0.0097	0.0108	0.0019
04:00 - 05:00	0.0123	0.0055	0.0054	0.0068	0.0052	0.0091	0.0026
05:00 - 06:00	0.0098	0.0090	0.0061	0.0128	0.0101	0.0050	0.0015
06:00 - 07:00	0.0116	0.0109	0.0133	0.0115	0.0119	0.0077	0.0079
07:00 - 08:00	0.0131	0.0123	0.0128	0.0109	0.0099	0.0118	0.0077
08:00 - 09:00	0.0100	0.0093	0.0139	0.0139	0.0054	0.0097	0.0081
09:00 - 10:00	0.0053	0.0092	0.0049	0.0105	0.0041	0.0118	0.0049
10:00 - 11:00	0.0050	0.0056	0.0085	0.0051	0.0049	0.0073	0.0076
11:00 - 12:00	0.0071	0.0048	0.0044	0.0087	0.0061	0.0083	0.0038

Average-24Hr*	0.0082	0.0068	0.0072	0.0089	0.0094	0.0080	0.0061
Max-1Hr	0.0139	0.0123	0.0139	0.0139	0.0190	0.0138	0.0128
Min-1Hr	0.0015	0.0016	0.0007	0.0001	0.0013	0.0004	0.0006
Standard-1Hr	0.17 ppm(320 ug/cu.m)						
Standard-24Hr	-						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide MTR-BCC2

Location : Wat Sophon Wanaram Monitor Period : 03-10 Mar 2025
Analyzer Model : API 200A Station No : SCT-15
Serial No : 2386 Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E Serial No : 587
Calibration Gas Cylinder I.D.: EB0102326
Certified Date : 08 Jan 2025 Cal Concentration (ppb) : 0,100,200,400
Expire Date : 07 Jan 2026

Time	NO2 Concentration (ppm)						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
13:00 - 14:00	0.0065	0.0045	0.0088	0.0102	0.0061	0.0062	0.0082
14:00 - 15:00	0.0049	0.0074	0.0111	0.0093	0.0041	0.0075	0.0042
15:00 - 16:00	0.0034	0.0078	0.0101	0.0113	0.0055	0.0098	0.0079
16:00 - 17:00	0.0048	0.0054	0.0116	0.0077	0.0075	0.0082	0.0052
17:00 - 18:00	0.0042	0.0112	0.0151	0.0142	0.0087	0.0094	0.0067
18:00 - 19:00	0.0058	0.0114	0.0118	0.0117	0.0061	0.0057	0.0043
19:00 - 20:00	0.0076	0.0070	0.0131	0.0159	0.0062	0.0041	0.0113
20:00 - 21:00	0.0089	0.0078	0.0072	0.0099	0.0081	0.0082	0.0059
21:00 - 22:00	0.0059	0.0093	0.0073	0.0098	0.0047	0.0064	0.0081
22:00 - 23:00	0.0079	0.0081	0.0111	0.0132	0.0068	0.0055	0.0050
23:00 - 00:00	0.0091	0.0084	0.0046	0.0118	0.0049	0.0081	0.0066
00:00 - 01:00	0.0053	0.0072	0.0046	0.0147	0.0071	0.0083	0.0065
01:00 - 02:00	0.0056	0.0111	0.0112	0.0143	0.0076	0.0066	0.0086
02:00 - 03:00	0.0062	0.0127	0.0103	0.0096	0.0059	0.0092	0.0039
03:00 - 04:00	0.0033	0.0065	0.0098	0.0115	0.0124	0.0083	0.0077
04:00 - 05:00	0.0055	0.0072	0.0116	0.0090	0.0155	0.0098	0.0071
05:00 - 06:00	0.0051	0.0044	0.0152	0.0077	0.0098	0.0088	0.0039
06:00 - 07:00	0.0071	0.0036	0.0100	0.0122	0.0093	0.0093	0.0057
07:00 - 08:00	0.0045	0.0039	0.0085	0.0092	0.0085	0.0049	0.0051
08:00 - 09:00	0.0061	0.0071	0.0065	0.0095	0.0059	0.0098	0.0068
09:00 - 10:00	0.0061	0.0072	0.0056	0.0224	0.0109	0.0062	0.0034
10:00 - 11:00	0.0089	0.0040	0.0048	0.0197	0.0080	0.0066	0.0102
11:00 - 12:00	0.0076	0.0074	0.0180	0.0267	0.0076	0.0070	0.0059
12:00 - 13:00	0.0023	0.0057	0.0221	0.0151	0.0055	0.0110	0.0073

Average-24Hr*	0.0059	0.0073	0.0104	0.0128	0.0076	0.0077	0.0065
Max-1Hr	0.0091	0.0127	0.0221	0.0267	0.0155	0.0110	0.0113
Min-1Hr	0.0023	0.0036	0.0046	0.0077	0.0041	0.0041	0.0034

Standard-1Hr	0.17 ppm(320 ug/cu.m)						
Standard-24Hr	-						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide MTR-BCC2

Location : Ban Plong Community Monitor Period : 03-10 Mar 2025
Analyzer Model : API 200A Station No : SECOT-019
Serial No : 1505 Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E Serial No : 587
Calibration Gas Cylinder I.D.: EB0102326
Certified Date : 08 Jan 2025 Cal Concentration (ppb) : 0,100,200,400
Expire Date : 07 Jan 2026

Time	NO2 Concentration (ppm)						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
13:00 - 14:00	0.0142	0.0021	0.0050	0.0089	0.0087	0.0064	0.0019
14:00 - 15:00	0.0084	0.0014	0.0053	0.0136	0.0064	0.0044	0.0039
15:00 - 16:00	0.0094	0.0097	0.0082	0.0058	0.0075	0.0042	0.0044
16:00 - 17:00	0.0099	0.0067	0.0033	0.0129	0.0082	0.0039	0.0023
17:00 - 18:00	0.0116	0.0068	0.0081	0.0108	0.0066	0.0080	0.0031
18:00 - 19:00	0.0131	0.0128	0.0069	0.0126	0.0051	0.0092	0.0065
19:00 - 20:00	0.0163	0.0121	0.0174	0.0113	0.0056	0.0075	0.0088
20:00 - 21:00	0.0136	0.0118	0.0152	0.0116	0.0112	0.0143	0.0147
21:00 - 22:00	0.0074	0.0145	0.0174	0.0113	0.0076	0.0130	0.0083
22:00 - 23:00	0.0031	0.0107	0.0189	0.0138	0.0055	0.0069	0.0079
23:00 - 00:00	0.0057	0.0053	0.0175	0.0138	0.0093	0.0069	0.0061
00:00 - 01:00	0.0035	0.0069	0.0154	0.0140	0.0081	0.0133	0.0058
01:00 - 02:00	0.0020	0.0080	0.0173	0.0086	0.0086	0.0108	0.0070
02:00 - 03:00	0.0030	0.0042	0.0035	0.0026	0.0030	0.0051	0.0036
03:00 - 04:00	0.0011	0.0029	0.0105	0.0117	0.0024	0.0058	0.0030
04:00 - 05:00	0.0048	0.0038	0.0105	0.0131	0.0069	0.0151	0.0038
05:00 - 06:00	0.0025	0.0031	0.0020	0.0075	0.0098	0.0066	0.0029
06:00 - 07:00	0.0037	0.0041	0.0089	0.0082	0.0071	0.0027	0.0065
07:00 - 08:00	0.0021	0.0018	0.0149	0.0138	0.0050	0.0138	0.0117
08:00 - 09:00	0.0076	0.0070	0.0117	0.0017	0.0134	0.0103	0.0132
09:00 - 10:00	0.0046	0.0076	0.0036	0.0105	0.0137	0.0054	0.0139
10:00 - 11:00	0.0054	0.0044	0.0081	0.0089	0.0098	0.0020	0.0083
11:00 - 12:00	0.0013	0.0036	0.0059	0.0098	0.0083	0.0039	0.0077
12:00 - 13:00	0.0029	0.0099	0.0017	0.0072	0.0060	0.0083	0.0096

Average-24Hr*	0.0066	0.0067	0.0099	0.0102	0.0077	0.0078	0.0069
Max-1Hr	0.0163	0.0145	0.0189	0.0140	0.0137	0.0151	0.0147
Min-1Hr	0.0011	0.0014	0.0017	0.0017	0.0024	0.0020	0.0019

Standard-1Hr	0.17 ppm(320 ug/cu.m)						
Standard-24Hr	-						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide MTR-BCC2

Location : Wat Nong Feab	Monitor Period : 03-10 Mar 2025
Analyzer Model : Teledyne T200	Station No : SS2-04
Serial No : 110	Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E	Serial No : 587
Calibration Gas Cylinder I.D.: EB0102326	
Certified Date : 10 Jan 2025	Cal Concentration (ppb) : 0,100,200,400
Expire Date : 09 Jan 2026	

Time	NO2 Concentration (ppm)						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
12:00 - 13:00	0.0068	0.0035	0.0090	0.0052	0.0049	0.0052	0.0033
13:00 - 14:00	0.0029	0.0026	0.0043	0.0036	0.0021	0.0029	0.0065
14:00 - 15:00	0.0077	0.0010	0.0040	0.0036	0.0071	0.0035	0.0029
15:00 - 16:00	0.0057	0.0067	0.0063	0.0096	0.0114	0.0035	0.0036
16:00 - 17:00	0.0094	0.0068	0.0129	0.0130	0.0102	0.0034	0.0060
17:00 - 18:00	0.0125	0.0093	0.0100	0.0128	0.0136	0.0075	0.0069
18:00 - 19:00	0.0125	0.0117	0.0111	0.0077	0.0083	0.0091	0.0106
19:00 - 20:00	0.0140	0.0161	0.0117	0.0119	0.0071	0.0080	0.0116
20:00 - 21:00	0.0113	0.0169	0.0104	0.0117	0.0118	0.0030	0.0106
21:00 - 22:00	0.0111	0.0146	0.0142	0.0176	0.0169	0.0035	0.0102
22:00 - 23:00	0.0047	0.0068	0.0120	0.0020	0.0127	0.0064	0.0029
23:00 - 00:00	0.0059	0.0064	0.0119	0.0046	0.0126	0.0035	0.0050
00:00 - 01:00	0.0075	0.0034	0.0089	0.0016	0.0160	0.0103	0.0110
01:00 - 02:00	0.0043	0.0024	0.0079	0.0016	0.0133	0.0105	0.0091
02:00 - 03:00	0.0037	0.0021	0.0078	0.0022	0.0153	0.0079	0.0058
03:00 - 04:00	0.0067	0.0063	0.0065	0.0030	0.0093	0.0053	0.0086
04:00 - 05:00	0.0062	0.0063	0.0141	0.0026	0.0093	0.0155	0.0151
05:00 - 06:00	0.0135	0.0139	0.0112	0.0039	0.0111	0.0138	0.0129
06:00 - 07:00	0.0104	0.0144	0.0174	0.0056	0.0146	0.0146	0.0120
07:00 - 08:00	0.0147	0.0115	0.0196	0.0028	0.0153	0.0070	0.0162
08:00 - 09:00	0.0119	0.0084	0.0123	0.0019	0.0078	0.0098	0.0100
09:00 - 10:00	0.0050	0.0061	0.0134	0.0029	0.0110	0.0063	0.0078
10:00 - 11:00	0.0073	0.0062	0.0089	0.0033	0.0043	0.0058	0.0120
11:00 - 12:00	0.0040	0.0065	0.0092	0.0034	0.0038	0.0043	0.0087

Average-24Hr*	0.0083	0.0079	0.0106	0.0058	0.0104	0.0071	0.0087
Max-1Hr	0.0147	0.0169	0.0196	0.0176	0.0169	0.0155	0.0162
Min-1Hr	0.0029	0.0010	0.0040	0.0016	0.0021	0.0029	0.0029

Standard-1Hr	0.17 ppm(320 ug/cu.m)						
Standard-24Hr	-						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Sulfur dioxide MTR-BCC2

Location : Wat Map Chalute	Monitor Period : 03-10 Mar 2025
Analyzer Model : API 100A	Station No : SS2-09
Serial No : 347	Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E	Serial No : 587
Calibration Gas Cylinder I.D.: EB0102326	
Certified Date : 10 Jan 2025	Cal Concentration (ppb) : 0,100,200,400
Expire Date : 09 Jan 2026	

Time	SO2 Concentration (ppm)						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
12:00 - 13:00	0.0044	0.0044	0.0030	0.0048	0.0032	0.0026	0.0126
13:00 - 14:00	0.0042	0.0054	0.0052	0.0035	0.0103	0.0025	0.0046
14:00 - 15:00	0.0038	0.0037	0.0058	0.0046	0.0029	0.0043	0.0035
15:00 - 16:00	0.0052	0.0046	0.0177	0.0027	0.0027	0.0042	0.0030
16:00 - 17:00	0.0055	0.0051	0.0086	0.0115	0.0027	0.0039	0.0054
17:00 - 18:00	0.0046	0.0044	0.0088	0.0039	0.0051	0.0037	0.0061
18:00 - 19:00	0.0034	0.0048	0.0052	0.0042	0.0047	0.0053	0.0042
19:00 - 20:00	0.0036	0.0037	0.0056	0.0040	0.0061	0.0034	0.0042
20:00 - 21:00	0.0036	0.0068	0.0038	0.0045	0.0049	0.0059	0.0032
21:00 - 22:00	0.0067	0.0050	0.0040	0.0034	0.0050	0.0053	0.0057
22:00 - 23:00	0.0055	0.0039	0.0056	0.0032	0.0034	0.0039	0.0041
23:00 - 00:00	0.0041	0.0069	0.0043	0.0039	0.0042	0.0062	0.0024
00:00 - 01:00	0.0031	0.0060	0.0046	0.0027	0.0034	0.0047	0.0031
01:00 - 02:00	0.0052	0.0057	0.0042	0.0028	0.0057	0.0053	0.0025
02:00 - 03:00	0.0063	0.0050	0.0029	0.0058	0.0048	0.0039	0.0056
03:00 - 04:00	0.0050	0.0042	0.0057	0.0066	0.0062	0.0046	0.0054
04:00 - 05:00	0.0041	0.0061	0.0035	0.0026	0.0039	0.0064	0.0044
05:00 - 06:00	0.0035	0.0049	0.0042	0.0038	0.0052	0.0025	0.0032
06:00 - 07:00	0.0030	0.0035	0.0061	0.0055	0.0033	0.0030	0.0024
07:00 - 08:00	0.0052	0.0029	0.0065	0.0055	0.0041	0.0035	0.0053
08:00 - 09:00	0.0039	0.0059	0.0055	0.0060	0.0064	0.0060	0.0063
09:00 - 10:00	0.0030	0.0068	0.0060	0.0063	0.0034	0.0106	0.0059
10:00 - 11:00	0.0047	0.0059	0.0051	0.0041	0.0113	0.0065	0.0034
11:00 - 12:00	0.0054	0.0047	0.0039	0.0045	0.0078	0.0037	0.0063

Average-24Hr*	0.0045	0.0050	0.0057	0.0046	0.0050	0.0047	0.0047
Max-1Hr	0.0067	0.0069	0.0177	0.0115	0.0113	0.0106	0.0126
Min-1Hr	0.0030	0.0029	0.0029	0.0026	0.0027	0.0025	0.0024

Standard-1Hr	0.30 ppm(780 ug/cu.m)						
Standard-24Hr	0.12 ppm(300 ug/cu.m)						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Sulfur dioxide

MTR-BCC2

Location : Wat Sophon Wanaram	Monitor Period : 03-10 Mar 2025
Analyzer Model : Teledyne T100	Station No : SCT-15
Serial No : 120	Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E	Serial No : 587
Calibration Gas Cylinder I.D.: EB0102326	
Certified Date : 10 Jan 2025	Cal Concentration (ppb) : 0,100,200,400
Expire Date : 09 Jan 2026	

Time	SO2 Concentration (ppm)						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
13:00 - 14:00	0.0016	0.0016	0.0096	0.0057	0.0019	0.0014	0.0052
14:00 - 15:00	0.0023	0.0070	0.0059	0.0063	0.0077	0.0031	0.0045
15:00 - 16:00	0.0039	0.0063	0.0076	0.0057	0.0040	0.0075	0.0086
16:00 - 17:00	0.0036	0.0024	0.0040	0.0094	0.0046	0.0048	0.0030
17:00 - 18:00	0.0026	0.0079	0.0020	0.0071	0.0093	0.0066	0.0078
18:00 - 19:00	0.0088	0.0080	0.0030	0.0056	0.0079	0.0026	0.0089
19:00 - 20:00	0.0099	0.0074	0.0065	0.0089	0.0052	0.0014	0.0044
20:00 - 21:00	0.0078	0.0065	0.0073	0.0078	0.0066	0.0049	0.0083
21:00 - 22:00	0.0037	0.0074	0.0052	0.0084	0.0036	0.0054	0.0067
22:00 - 23:00	0.0087	0.0081	0.0059	0.0069	0.0047	0.0081	0.0077
23:00 - 00:00	0.0091	0.0065	0.0053	0.0069	0.0033	0.0062	0.0046
00:00 - 01:00	0.0038	0.0087	0.0019	0.0083	0.0092	0.0066	0.0031
01:00 - 02:00	0.0012	0.0094	0.0074	0.0084	0.0052	0.0048	0.0066
02:00 - 03:00	0.0056	0.0068	0.0066	0.0048	0.0088	0.0076	0.0011
03:00 - 04:00	0.0024	0.0067	0.0074	0.0080	0.0075	0.0066	0.0062
04:00 - 05:00	0.0050	0.0073	0.0062	0.0059	0.0088	0.0094	0.0089
05:00 - 06:00	0.0037	0.0051	0.0092	0.0087	0.0058	0.0081	0.0031
06:00 - 07:00	0.0096	0.0027	0.0090	0.0056	0.0062	0.0073	0.0042
07:00 - 08:00	0.0025	0.0033	0.0077	0.0078	0.0092	0.0043	0.0034
08:00 - 09:00	0.0066	0.0015	0.0056	0.0081	0.0015	0.0067	0.0061
09:00 - 10:00	0.0031	0.0077	0.0079	0.0084	0.0071	0.0072	0.0038
10:00 - 11:00	0.0071	0.0050	0.0090	0.0081	0.0077	0.0052	0.0055
11:00 - 12:00	0.0078	0.0071	0.0052	0.0074	0.0091	0.0050	0.0047
12:00 - 13:00	0.0009	0.0095	0.0062	0.0086	0.0073	0.0083	0.0054

Average-24Hr*	0.0051	0.0062	0.0063	0.0074	0.0063	0.0058	0.0055
Max-1Hr	0.0099	0.0095	0.0096	0.0094	0.0093	0.0094	0.0089
Min-1Hr	0.0009	0.0015	0.0019	0.0048	0.0015	0.0014	0.0011

Standard-1Hr	0.30 ppm(780 ug/cu.m)						
Standard-24Hr	0.12 ppm(300 ug/cu.m)						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Sulfur dioxide

MTR-BCC2

Location : Ban Plong Community	Monitor Period : 03-10 Mar 2025
Analyzer Model : Teledyne T100	Station No : SECOT-019
Serial No : 186	Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E	Serial No : 587
Calibration Gas Cylinder I.D.: EB0102326	
Certified Date : 10 Jan 2025	Cal Concentration (ppb) : 0,100,200,400
Expire Date : 09 Jan 2026	

Time	SO2 Concentration (ppm)						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
13:00 - 14:00	0.0065	0.0045	0.0088	0.0102	0.0081	0.0062	0.0082
14:00 - 15:00	0.0049	0.0074	0.0111	0.0093	0.0041	0.0075	0.0042
15:00 - 16:00	0.0034	0.0078	0.0101	0.0113	0.0055	0.0098	0.0079
16:00 - 17:00	0.0048	0.0054	0.0116	0.0077	0.0075	0.0082	0.0052
17:00 - 18:00	0.0042	0.0112	0.0151	0.0142	0.0087	0.0094	0.0067
18:00 - 19:00	0.0058	0.0114	0.0118	0.0117	0.0061	0.0057	0.0043
19:00 - 20:00	0.0076	0.0070	0.0131	0.0159	0.0062	0.0041	0.0113
20:00 - 21:00	0.0089	0.0078	0.0072	0.0099	0.0081	0.0082	0.0059
21:00 - 22:00	0.0059	0.0093	0.0073	0.0098	0.0047	0.0064	0.0081
22:00 - 23:00	0.0079	0.0081	0.0111	0.0132	0.0068	0.0055	0.0050
23:00 - 00:00	0.0091	0.0084	0.0046	0.0118	0.0049	0.0081	0.0066
00:00 - 01:00	0.0053	0.0072	0.0046	0.0147	0.0071	0.0083	0.0065
01:00 - 02:00	0.0056	0.0111	0.0112	0.0143	0.0076	0.0066	0.0086
02:00 - 03:00	0.0062	0.0127	0.0103	0.0096	0.0059	0.0092	0.0039
03:00 - 04:00	0.0033	0.0065	0.0098	0.0115	0.0124	0.0083	0.0077
04:00 - 05:00	0.0055	0.0072	0.0116	0.0090	0.0155	0.0098	0.0071
05:00 - 06:00	0.0051	0.0044	0.0152	0.0077	0.0098	0.0088	0.0039
06:00 - 07:00	0.0071	0.0036	0.0100	0.0122	0.0093	0.0093	0.0057
07:00 - 08:00	0.0045	0.0039	0.0085	0.0092	0.0085	0.0049	0.0051
08:00 - 09:00	0.0061	0.0071	0.0085	0.0095	0.0059	0.0098	0.0068
09:00 - 10:00	0.0061	0.0072	0.0056	0.0224	0.0109	0.0062	0.0034
10:00 - 11:00	0.0089	0.0040	0.0048	0.0197	0.0080	0.0066	0.0102
11:00 - 12:00	0.0076	0.0074	0.0180	0.0267	0.0076	0.0070	0.0059
12:00 - 13:00	0.0023	0.0057	0.0221	0.0151	0.0055	0.0110	0.0073

Average-24Hr*	0.0059	0.0073	0.0104	0.0128	0.0076	0.0077	0.0065
Max-1Hr	0.0091	0.0127	0.0221	0.0267	0.0155	0.0110	0.0113
Min-1Hr	0.0023	0.0036	0.0046	0.0077	0.0041	0.0041	0.0034

Standard-1Hr	0.30 ppm(780 ug/cu.m)						
Standard-24Hr	0.12 ppm(300 ug/cu.m)						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Sulfur dioxide

MTR-BCC2

Location : Wat Nong Feab	Monitor Period : 03-10 Mar 2025
Analyzer Model : API 100A	Station No : SS2-04
Serial No : 083	Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E	Serial No : 587
Calibration Gas Cylinder I.D.: EB0102326	
Certified Date : 10 Jan 2025	Cal Concentration (ppb) : 0,100,200,400
Expire Date : 09 Jan 2026	

Time	SO2 Concentration (ppm)						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
12:00 - 13:00	0.0042	0.0063	0.0035	0.0065	0.0044	0.0065	0.0035
13:00 - 14:00	0.0045	0.0109	0.0044	0.0071	0.0045	0.0050	0.0047
14:00 - 15:00	0.0054	0.0065	0.0040	0.0033	0.0051	0.0073	0.0072
15:00 - 16:00	0.0047	0.0133	0.0097	0.0040	0.0059	0.0034	0.0048
16:00 - 17:00	0.0036	0.0057	0.0091	0.0044	0.0038	0.0037	0.0050
17:00 - 18:00	0.0066	0.0061	0.0043	0.0052	0.0050	0.0060	0.0037
18:00 - 19:00	0.0033	0.0061	0.0071	0.0070	0.0039	0.0074	0.0047
19:00 - 20:00	0.0062	0.0061	0.0045	0.0067	0.0050	0.0064	0.0064
20:00 - 21:00	0.0059	0.0039	0.0038	0.0043	0.0060	0.0040	0.0054
21:00 - 22:00	0.0049	0.0071	0.0064	0.0058	0.0057	0.0048	0.0050
22:00 - 23:00	0.0053	0.0039	0.0044	0.0051	0.0065	0.0052	0.0056
23:00 - 00:00	0.0062	0.0038	0.0050	0.0057	0.0052	0.0057	0.0046
00:00 - 01:00	0.0041	0.0051	0.0064	0.0053	0.0057	0.0045	0.0039
01:00 - 02:00	0.0032	0.0031	0.0052	0.0066	0.0061	0.0039	0.0069
02:00 - 03:00	0.0057	0.0062	0.0046	0.0071	0.0065	0.0035	0.0056
03:00 - 04:00	0.0053	0.0038	0.0062	0.0055	0.0039	0.0064	0.0036
04:00 - 05:00	0.0060	0.0035	0.0052	0.0047	0.0050	0.0045	0.0062
05:00 - 06:00	0.0050	0.0053	0.0038	0.0034	0.0074	0.0047	0.0039
06:00 - 07:00	0.0033	0.0035	0.0058	0.0054	0.0073	0.0058	0.0062
07:00 - 08:00	0.0066	0.0032	0.0057	0.0035	0.0047	0.0046	0.0043
08:00 - 09:00	0.0052	0.0050	0.0056	0.0042	0.0036	0.0069	0.0074
09:00 - 10:00	0.0052	0.0049	0.0070	0.0046	0.0067	0.0065	0.0062
10:00 - 11:00	0.0042	0.0057	0.0040	0.0058	0.0041	0.0052	0.0062
11:00 - 12:00	0.0034	0.0051	0.0066	0.0046	0.0038	0.0048	0.0047
Average-24Hr*	0.0049	0.0056	0.0055	0.0052	0.0052	0.0053	0.0052
Max-1Hr	0.0066	0.0133	0.0097	0.0071	0.0074	0.0074	0.0074
Min-1Hr	0.0032	0.0031	0.0035	0.0033	0.0036	0.0034	0.0035
Standard-1Hr	0.30 ppm(780 ug/cu.m)						
Standard-24Hr	0.12 ppm(300 ug/cu.m)						

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

ภาคผนวก ง.3

ใบรับรองผลการตรวจวัดระดับเสียงในบรรยากาศทั่วไป



Noise Monitoring Result : Community Noise

MTR-BCC2

Location : Wat Map Chalute			Monitor Period : 03-10 Mar 2025				
SLM Model : Cirrus CR161B			Serial No : G301250				
Site Operator : Mr. Siwanon Kulawong							
Calibrator Model : Cirrus CR:515			Serial No : 97097				
Calibration Ref dB(A) : 94.0			Certified Date : 02 Oct 2024				
SLM Reading / Adjust dB(A) : 94.6/-0.9			Expire Date : 01 Oct 2025				
Cal Sheet No.: CR-515-2025-053							
Time	Equivalent Sound Pressure Level (dB(A))						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
11:00 - 12:00	58.0	55.4	56.8	57.1	64.5	57.1	53.7
12:00 - 13:00	58.8	55.2	57.3	56.5	62.3	59.3	54.7
13:00 - 14:00	58.2	55.7	58.0	56.3	58.3	60.3	56.2
14:00 - 15:00	64.1	56.7	58.1	58.8	59.2	56.0	54.1
15:00 - 16:00	66.6	58.2	56.9	57.5	58.6	54.8	55.9
16:00 - 17:00	57.9	58.4	57.9	61.7	64.0	55.9	56.9
17:00 - 18:00	57.9	60.0	57.9	62.5	65.2	56.6	55.5
18:00 - 19:00	57.9	58.8	57.8	64.3	66.6	57.4	56.3
19:00 - 20:00	55.5	55.8	54.8	64.9	66.6	54.4	53.4
20:00 - 21:00	54.6	56.3	55.9	60.0	66.3	55.0	53.4
21:00 - 22:00	52.1	50.1	57.0	52.5	65.1	51.6	49.9
22:00 - 23:00	49.8	51.4	52.9	50.6	57.8	52.4	49.8
23:00 - 00:00	47.7	50.0	49.4	51.7	49.4	50.0	49.0
00:00 - 01:00	47.9	48.9	49.3	50.2	48.2	49.9	48.4
01:00 - 02:00	49.5	50.7	51.4	46.1	51.3	48.0	49.2
02:00 - 03:00	48.8	50.9	49.1	54.1	47.8	48.9	48.7
03:00 - 04:00	48.6	52.1	47.7	49.9	52.9	50.2	51.0
04:00 - 05:00	49.2	50.6	54.3	50.9	52.5	53.0	50.7
05:00 - 06:00	56.1	57.3	57.6	57.1	59.7	55.2	54.9
06:00 - 07:00	60.0	60.8	61.0	60.2	59.4	58.0	58.8
07:00 - 08:00	60.7	61.0	62.0	62.1	62.9	58.7	60.7
08:00 - 09:00	59.3	62.0	59.2	60.3	62.4	56.4	57.4
09:00 - 10:00	57.5	60.5	57.4	60.9	57.0	60.3	54.6
10:00 - 11:00	55.4	56.9	56.5	62.9	54.7	53.4	54.3
Leq(24)*	58.4	57.2	57.0	59.5	61.9	56.0	54.9
Ldn	61.5	61.7	61.8	62.6	64.3	60.3	59.8
Lmax **	84.6	81.3	82.0	82.9	81.6	82.4	79.8
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

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

** Maximum Sound Pressure Level between 11:00-11:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-BCC2

Location : Wat Map Chalute			Monitor Period : 03-10 Mar 2025				
SLM Model : Cirrus CR161B			Serial No : G301250				
Site Operator : Mr. Siwanon Kulawong							
Calibrator Model : Cirrus CR:515				Serial No : 97097			
Calibration Ref dB(A) : 94.0				Certified Date : 02 Oct 2024			
SLM Reading / Adjust dB(A) : 94.6/-0.9				Expire Date : 01 Oct 2025			
Cal Sheet No.: CR-515-2025-053							
Time	L90 (dB(A))						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
11:00 - 12:00	47.6	48.7	47.7	47.0	57.4	48.9	44.6
12:00 - 13:00	49.7	48.9	47.8	47.5	50.9	48.2	45.5
13:00 - 14:00	50.3	50.5	48.7	48.3	52.2	46.9	46.9
14:00 - 15:00	55.6	50.1	49.1	48.8	51.3	46.5	46.8
15:00 - 16:00	58.2	50.5	48.8	50.5	49.1	45.2	46.1
16:00 - 17:00	50.1	49.9	49.7	51.4	50.0	45.7	47.4
17:00 - 18:00	48.9	49.7	48.5	51.8	59.3	45.7	45.7
18:00 - 19:00	48.6	48.7	47.2	54.7	60.7	47.1	45.8
19:00 - 20:00	46.5	46.9	45.6	52.6	61.3	45.4	44.7
20:00 - 21:00	47.0	46.8	46.4	46.2	61.8	45.3	44.7
21:00 - 22:00	46.9	45.5	47.2	47.1	52.4	45.2	44.2
22:00 - 23:00	46.0	45.0	46.2	46.6	45.0	45.8	44.0
23:00 - 00:00	45.2	44.6	45.0	44.5	43.6	45.4	44.2
00:00 - 01:00	45.7	45.0	45.5	44.4	43.5	45.4	44.0
01:00 - 02:00	45.5	45.3	44.9	44.2	42.5	45.7	43.9
02:00 - 03:00	46.3	46.5	45.1	43.9	42.3	44.6	44.4
03:00 - 04:00	44.5	45.2	43.7	43.6	43.5	44.6	43.3
04:00 - 05:00	44.3	44.4	43.6	43.3	43.5	44.2	44.3
05:00 - 06:00	44.9	44.5	44.0	43.6	45.9	45.0	44.7
06:00 - 07:00	54.7	51.9	53.2	50.1	49.0	48.8	51.7
07:00 - 08:00	55.3	52.6	54.7	55.5	50.8	47.3	51.7
08:00 - 09:00	52.9	52.9	49.5	53.9	48.4	46.2	46.9
09:00 - 10:00	51.1	49.3	49.7	51.6	46.8	45.6	46.3
10:00 - 11:00	50.2	47.9	50.0	55.8	46.3	44.7	45.3
L90(avg)*	51.0	48.8	48.6	50.5	54.5	46.2	46.4

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-BCC2


Location : North of Fence	Monitor Period : 03-10 Mar 2025
SLM Model : Cirrus CR161B	Serial No : G301331
Site Operator : Mr. Siwanon Kulawong	


Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : 02 Oct 2024
SLM Reading / Adjust dB(A) : 93.8/-0.1	Expire Date : 01 Oct 2025
Cal Sheet No.: CR-515-2025-053	

Time	Equivalent Sound Pressure Level (dB(A))						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
10:00 - 11:00	65.4	65.4	65.9	65.4	65.3	66.1	66.1
11:00 - 12:00	65.0	65.1	67.9	65.0	65.1	65.9	65.9
12:00 - 13:00	64.8	64.9	65.1	65.2	64.6	65.6	65.7
13:00 - 14:00	65.1	65.1	64.8	65.1	64.8	65.9	65.8
14:00 - 15:00	65.0	65.2	64.9	64.8	65.3	65.5	65.9
15:00 - 16:00	65.1	65.3	65.0	65.1	65.2	65.7	65.6
16:00 - 17:00	65.6	65.7	65.3	65.5	66.3	66.6	66.0
17:00 - 18:00	65.7	65.9	65.4	65.6	66.3	66.4	66.2
18:00 - 19:00	65.5	66.3	65.9	65.7	66.6	66.5	66.5
19:00 - 20:00	65.6	66.1	66.0	65.8	66.5	66.4	66.6
20:00 - 21:00	65.6	66.1	65.8	65.8	66.2	66.5	66.9
21:00 - 22:00	65.5	65.9	66.0	65.8	66.2	66.4	66.9
22:00 - 23:00	65.8	65.9	65.8	65.7	66.5	66.6	66.9
23:00 - 00:00	65.9	65.9	66.0	65.6	66.4	66.7	67.1
00:00 - 01:00	65.9	66.0	66.0	65.7	66.6	67.0	67.2
01:00 - 02:00	65.9	66.0	66.0	65.8	66.2	67.1	67.3
02:00 - 03:00	65.9	66.1	66.0	65.6	66.7	67.1	67.4
03:00 - 04:00	66.0	66.2	66.2	65.5	66.4	67.1	67.4
04:00 - 05:00	66.1	66.1	66.2	65.6	66.6	67.1	67.5
05:00 - 06:00	65.9	66.2	66.1	65.5	66.4	67.2	67.5
06:00 - 07:00	66.2	66.1	66.2	65.7	66.3	67.2	67.5
07:00 - 08:00	66.1	65.9	65.9	65.8	66.2	67.0	67.1
08:00 - 09:00	65.7	65.6	65.8	65.6	66.2	67.0	66.4
09:00 - 10:00	65.5	65.7	65.6	65.3	66.1	66.5	66.4
Leq(24)*	65.6	65.8	65.9	65.5	66.1	66.6	66.7
Ldn	72.3	72.4	72.4	72.0	72.8	73.3	73.6
Lmax **	81.0	76.5	90.0	75.6	75.7	79.7	77.7
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

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

** Maximum Sound Pressure Level between 10:00-10:00


(Miss Katesarin Vorradetwittaya)
Environmental Scientist


(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-BCC2


Location : North of Fence	Monitor Period : 03-10 Mar 2025
SLM Model : Cirrus CR161B	Serial No : G301331
Site Operator : Mr. Siwanon Kulawong	

Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : 02 Oct 2024
SLM Reading / Adjust dB(A) : 93.8/-0.1	Expire Date : 01 Oct 2025
Cal Sheet No.: CR-515-2025-053	

Time	L90 (dB(A))						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
10:00 - 11:00	64.7	64.7	65.1	64.7	64.8	65.5	65.6
11:00 - 12:00	64.4	64.5	65.1	64.5	64.3	65.4	65.3
12:00 - 13:00	64.2	64.4	64.4	64.6	64.1	65.1	65.0
13:00 - 14:00	64.5	64.5	64.4	64.4	64.2	65.1	65.1
14:00 - 15:00	64.5	64.6	64.5	64.2	64.6	64.9	65.2
15:00 - 16:00	64.5	64.6	64.4	64.6	64.6	64.9	65.0
16:00 - 17:00	64.9	64.9	64.6	64.7	65.5	65.9	65.2
17:00 - 18:00	65.1	65.3	64.8	65.0	65.8	65.8	65.4
18:00 - 19:00	65.0	65.6	65.1	65.0	66.0	66.0	65.9
19:00 - 20:00	65.0	65.5	65.3	65.2	65.8	66.0	66.0
20:00 - 21:00	65.1	65.5	65.2	65.1	65.7	66.0	66.3
21:00 - 22:00	65.1	65.3	65.4	65.2	65.7	66.0	66.4
22:00 - 23:00	65.3	65.3	65.3	65.1	65.9	66.2	66.4
23:00 - 00:00	65.3	65.3	65.4	65.0	65.8	66.2	66.6
00:00 - 01:00	65.3	65.4	65.4	65.0	65.9	66.5	66.6
01:00 - 02:00	65.4	65.4	65.4	65.1	65.7	66.6	66.7
02:00 - 03:00	65.4	65.5	65.4	65.0	66.1	66.6	66.8
03:00 - 04:00	65.4	65.7	65.7	64.9	66.0	66.6	66.9
04:00 - 05:00	65.5	65.6	65.7	65.0	66.0	66.7	67.0
05:00 - 06:00	65.3	65.7	65.6	64.9	65.9	66.7	67.0
06:00 - 07:00	65.5	65.5	65.5	65.1	65.7	66.7	66.9
07:00 - 08:00	65.4	65.2	65.3	65.3	65.8	66.5	66.4
08:00 - 09:00	65.0	65.1	65.1	65.0	65.7	66.4	65.8
09:00 - 10:00	64.8	65.0	65.0	64.7	65.6	66.0	65.8
L90(avg)*	65.0	65.2	65.1	64.9	65.5	66.0	66.1

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


(Miss Katesarin Vorradetwittaya)
Environmental Scientist


(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-BCC2

Location : South of Fence	Monitor Period : 03-10 Mar 2025
SLM Model : Cirrus CR161B	Serial No : G302356
Site Operator : Mr. Siwanon Kulawong	
Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : 02 Oct 2024
SLM Reading / Adjust dB(A) : 93.3/0.4	Expire Date : 01 Oct 2025
Cal Sheet No.: CR-515-2025-053	

Time	Equivalent Sound Pressure Level (dB(A))						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
10:00 - 11:00	60.2	65.5	61.3	60.8	63.3	60.2	59.5
11:00 - 12:00	67.3	65.2	64.5	65.3	64.0	65.4	65.6
12:00 - 13:00	65.3	61.2	58.5	63.9	56.7	65.5	66.5
13:00 - 14:00	64.1	63.9	59.4	59.7	59.5	62.5	61.1
14:00 - 15:00	58.9	58.5	63.3	61.7	67.0	65.1	59.3
15:00 - 16:00	58.4	59.8	57.2	60.3	61.7	65.0	60.0
16:00 - 17:00	57.3	60.0	59.2	59.1	59.5	60.0	59.1
17:00 - 18:00	57.4	60.0	59.3	59.4	59.8	58.4	59.3
18:00 - 19:00	65.7	66.7	66.6	66.2	65.4	65.7	65.5
19:00 - 20:00	63.2	63.8	63.7	64.2	60.5	62.8	62.9
20:00 - 21:00	65.1	66.1	62.9	60.3	60.7	61.4	61.7
21:00 - 22:00	63.3	61.6	66.3	62.4	64.8	63.0	62.9
22:00 - 23:00	66.7	65.5	60.7	68.6	62.7	67.9	63.4
23:00 - 00:00	57.3	58.8	59.5	62.2	64.6	63.6	61.4
00:00 - 01:00	68.0	66.6	56.2	64.2	65.1	61.0	63.7
01:00 - 02:00	61.8	57.0	68.2	68.6	60.9	60.1	58.2
02:00 - 03:00	58.1	68.3	60.4	68.8	57.9	60.3	60.2
03:00 - 04:00	56.9	62.7	60.2	64.2	58.9	58.4	60.3
04:00 - 05:00	59.5	59.0	69.8	70.9	59.7	59.5	60.3
05:00 - 06:00	59.3	56.6	59.3	64.6	59.8	60.5	60.2
06:00 - 07:00	66.7	66.5	67.4	67.1	69.2	66.9	66.0
07:00 - 08:00	59.0	59.3	59.9	60.0	58.7	60.4	60.9
08:00 - 09:00	60.3	59.7	60.0	61.0	60.6	60.2	61.6
09:00 - 10:00	60.3	60.8	61.6	60.3	61.5	59.0	60.0

Leq(24)*	63.2	63.5	63.5	64.9	62.9	63.1	62.3
Ldn	69.9	70.5	70.9	73.3	69.9	69.7	68.6
Lmax **	88.7	75.3	81.6	82.8	82.1	83.9	80.0
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

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

** Maximum Sound Pressure Level between 10:00-10:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-BCC2

Location : South of Fence	Monitor Period : 03-10 Mar 2025
SLM Model : Cirrus CR161B	Serial No : G302356
Site Operator : Mr. Siwanon Kulawong	
Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : 02 Oct 2024
SLM Reading / Adjust dB(A) : 93.3/0.4	Expire Date : 01 Oct 2025
Cal Sheet No.: CR-515-2025-053	

Time	L90 (dB(A))						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
10:00 - 11:00	59.3	57.1	59.1	58.9	56.4	56.7	57.7
11:00 - 12:00	61.1	60.0	57.6	59.5	56.7	60.4	58.8
12:00 - 13:00	58.9	58.7	57.0	55.8	56.0	59.9	59.9
13:00 - 14:00	57.0	59.6	56.4	56.2	55.9	60.1	58.9
14:00 - 15:00	56.9	57.0	56.3	58.9	59.6	60.1	58.8
15:00 - 16:00	56.7	57.5	55.7	58.7	59.1	59.2	58.8
16:00 - 17:00	56.6	58.4	58.6	58.6	59.0	59.5	58.7
17:00 - 18:00	56.9	59.0	58.8	58.8	59.3	56.4	58.9
18:00 - 19:00	57.9	58.9	59.3	59.0	60.2	57.1	59.3
19:00 - 20:00	59.5	58.8	59.3	60.5	60.1	60.0	59.8
20:00 - 21:00	56.6	59.2	59.0	59.8	60.1	60.0	60.1
21:00 - 22:00	59.0	58.8	59.7	59.9	56.5	60.1	60.7
22:00 - 23:00	58.9	57.4	59.3	59.9	56.6	59.9	60.3
23:00 - 00:00	55.6	56.6	59.1	59.6	60.2	57.1	60.4
00:00 - 01:00	56.0	59.1	55.8	62.7	60.2	59.8	58.8
01:00 - 02:00	58.9	55.7	59.3	63.1	59.9	59.8	57.4
02:00 - 03:00	56.0	56.0	59.6	64.3	56.3	59.9	60.0
03:00 - 04:00	55.7	59.1	59.6	62.1	56.3	57.2	60.0
04:00 - 05:00	58.7	58.3	59.8	65.9	59.4	57.3	60.1
05:00 - 06:00	58.7	56.1	56.5	62.6	59.4	59.9	57.9
06:00 - 07:00	56.8	58.6	59.4	59.5	56.8	59.9	57.8
07:00 - 08:00	57.0	58.9	59.3	59.7	56.8	59.7	60.3
08:00 - 09:00	59.0	56.0	56.2	59.5	59.3	57.4	59.6
09:00 - 10:00	57.5	56.7	59.1	56.5	59.2	56.5	59.4

L90(avg)*	58.0	58.2	58.5	60.7	58.6	59.1	59.4
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Remark : * Average time between 10:00-10:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-BCC2

Location : East of Fence	Monitor Period : 03-10 Mar 2025
SLM Model : Cirrus CR161B	Serial No : G301339
Site Operator : Mr. Siwanon Kulawong	

Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : 02 Oct 2024
SLM Reading / Adjust dB(A) : 93.7/0.0	Expire Date : 01 Oct 2025
Cal Sheet No.: CR-515-2025-053	

Time	Equivalent Sound Pressure Level (dB(A))						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
10:00 - 11:00	57.0	58.4	57.9	57.2	57.5	60.3	59.3
11:00 - 12:00	59.1	59.4	63.0	58.9	59.9	60.2	61.1
12:00 - 13:00	58.5	56.1	57.0	59.2	56.4	60.8	60.8
13:00 - 14:00	56.9	57.5	58.7	57.3	56.3	59.5	58.2
14:00 - 15:00	56.4	57.7	57.9	56.8	58.9	59.3	58.0
15:00 - 16:00	56.0	58.2	56.9	56.7	59.9	59.7	57.6
16:00 - 17:00	56.1	58.1	56.8	56.5	60.2	59.1	55.9
17:00 - 18:00	55.5	57.5	55.9	55.7	59.9	57.8	54.7
18:00 - 19:00	61.0	61.2	61.3	61.2	61.6	62.0	59.7
19:00 - 20:00	58.8	61.4	57.3	61.1	60.4	60.5	57.5
20:00 - 21:00	61.1	61.1	60.3	57.2	60.0	59.7	58.7
21:00 - 22:00	56.9	58.2	61.9	57.2	60.3	59.9	59.3
22:00 - 23:00	61.9	61.5	56.6	62.4	61.6	62.6	59.7
23:00 - 00:00	55.7	55.7	56.6	56.4	60.8	60.1	60.4
00:00 - 01:00	61.9	62.1	56.4	59.4	60.5	60.1	63.1
01:00 - 02:00	57.7	56.4	63.8	59.9	59.6	60.2	60.4
02:00 - 03:00	56.1	63.3	57.2	65.1	60.8	60.2	61.0
03:00 - 04:00	56.1	61.9	58.4	63.8	60.0	60.3	61.4
04:00 - 05:00	56.9	56.9	58.9	64.6	60.1	60.6	61.4
05:00 - 06:00	56.4	57.1	58.0	59.4	59.7	60.1	61.0
06:00 - 07:00	60.8	60.6	61.7	61.2	62.2	62.5	63.6
07:00 - 08:00	57.9	57.2	58.1	59.5	60.4	61.1	61.2
08:00 - 09:00	57.2	58.7	57.8	59.3	60.2	60.6	59.6
09:00 - 10:00	58.9	58.6	58.0	58.3	60.6	60.2	60.2

Leq(24)*	58.5	59.5	59.2	60.2	60.1	60.4	60.2
Ldn	65.2	66.5	65.8	68.2	67.0	67.2	67.6
Lmax **	78.4	84.0	84.3	76.6	88.6	93.1	95.1

Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

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

** Maximum Sound Pressure Level between 10:00-10:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-BCC2

Location : East of Fence	Monitor Period : 03-10 Mar 2025
SLM Model : Cirrus CR161B	Serial No : G301339
Site Operator : Mr. Siwanon Kulawong	

Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : 02 Oct 2024
SLM Reading / Adjust dB(A) : 93.7/0.0	Expire Date : 01 Oct 2025
Cal Sheet No.: CR-515-2025-053	

Time	L90 (dB(A))						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
10:00 - 11:00	55.8	56.7	56.5	55.8	56.4	59.2	58.2
11:00 - 12:00	56.6	56.6	57.1	56.0	55.9	58.7	58.9
12:00 - 13:00	57.1	55.0	55.8	56.0	55.2	58.5	57.9
13:00 - 14:00	55.4	56.3	55.6	56.2	55.3	58.2	56.9
14:00 - 15:00	55.4	56.6	56.2	55.6	56.3	57.0	56.3
15:00 - 16:00	54.8	56.2	56.0	55.6	57.3	56.9	55.1
16:00 - 17:00	55.3	55.5	55.4	55.6	58.7	57.6	55.2
17:00 - 18:00	54.2	55.5	54.2	54.4	58.6	56.6	54.0
18:00 - 19:00	55.2	56.6	55.4	55.1	59.1	58.9	54.7
19:00 - 20:00	55.6	57.7	55.8	56.9	59.5	58.9	55.1
20:00 - 21:00	56.0	55.8	56.6	55.7	59.1	58.8	56.9
21:00 - 22:00	55.2	55.1	56.1	56.2	59.4	58.9	58.2
22:00 - 23:00	56.9	55.8	55.4	56.0	59.8	59.3	58.9
23:00 - 00:00	54.7	54.8	55.3	55.2	59.7	59.2	59.7
00:00 - 01:00	55.3	56.1	55.4	58.3	59.7	59.2	60.6
01:00 - 02:00	55.6	55.3	55.9	58.5	58.4	59.3	59.5
02:00 - 03:00	55.1	55.8	55.9	61.8	60.1	59.2	60.2
03:00 - 04:00	55.1	56.1	57.3	60.5	59.0	59.4	60.6
04:00 - 05:00	55.7	55.9	57.1	59.5	59.3	59.7	60.5
05:00 - 06:00	55.2	56.2	56.6	58.3	57.4	59.2	60.1
06:00 - 07:00	56.2	55.6	56.1	55.8	58.0	59.7	60.9
07:00 - 08:00	56.9	56.2	56.8	58.6	59.4	60.1	59.9
08:00 - 09:00	56.3	56.5	56.8	58.0	59.0	59.6	58.6
09:00 - 10:00	57.0	57.2	56.4	56.4	59.1	59.1	59.2

L90(avg)*	55.8	56.1	56.1	57.4	58.5	58.9	58.6
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Remark : * Average time between 10:00-10:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-BCC2

Location : West of Fence	Monitor Period : 03-10 Mar 2025
SLM Model : Cirrus CR161B	Serial No : G301333
Site Operator : Mr. Siwanon Kulawong	
Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : 02 Oct 2024
SLM Reading / Adjust dB(A) : 93.5/0.2	Expire Date : 01 Oct 2025
Cal Sheet No.: CR-515-2025-053	

Time	Equivalent Sound Pressure Level (dB(A))						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
10:00 - 11:00	63.1	62.8	63.1	62.6	63.2	63.5	64.5
11:00 - 12:00	63.0	62.8	63.5	62.4	62.6	64.3	63.8
12:00 - 13:00	61.5	62.7	61.8	62.1	61.8	62.8	62.4
13:00 - 14:00	62.2	62.6	62.3	62.0	62.3	63.4	62.7
14:00 - 15:00	61.2	60.8	61.7	61.6	62.4	62.8	62.4
15:00 - 16:00	61.4	61.1	61.3	61.4	61.9	62.4	61.2
16:00 - 17:00	62.1	62.0	61.1	62.1	62.9	63.4	61.4
17:00 - 18:00	62.6	62.2	61.4	62.6	63.4	63.0	62.4
18:00 - 19:00	64.8	67.2	63.4	63.3	64.8	64.1	63.8
19:00 - 20:00	63.3	63.1	62.8	62.6	63.6	63.0	63.0
20:00 - 21:00	62.5	63.2	62.8	62.6	63.7	63.8	63.8
21:00 - 22:00	65.6	62.9	63.2	62.8	63.5	63.4	63.7
22:00 - 23:00	63.4	62.8	62.9	63.0	64.2	63.6	63.6
23:00 - 00:00	65.6	62.4	62.8	62.6	63.5	63.2	64.1
00:00 - 01:00	63.0	63.2	63.3	63.2	63.9	64.2	64.4
01:00 - 02:00	62.9	62.7	63.1	63.4	63.4	64.0	64.1
02:00 - 03:00	62.7	63.2	63.8	63.3	63.6	63.6	63.8
03:00 - 04:00	62.9	63.2	63.3	62.9	63.2	63.6	63.8
04:00 - 05:00	64.2	62.7	63.3	63.0	63.0	63.8	64.0
05:00 - 06:00	63.3	63.2	63.0	63.0	63.4	63.9	63.6
06:00 - 07:00	63.6	63.4	63.7	63.4	64.6	64.7	64.7
07:00 - 08:00	62.9	62.4	62.9	62.8	63.3	63.4	63.2
08:00 - 09:00	62.4	62.6	62.3	62.6	63.3	63.5	62.5
09:00 - 10:00	62.7	63.1	65.2	62.5	63.0	63.8	63.1

Leq(24)*	63.2	63.0	62.9	62.7	63.3	63.6	63.4
Ldn	69.9	69.4	69.6	69.4	70.0	70.2	70.3
Lmax **	77.3	78.8	81.7	73.0	75.5	79.0	82.0

Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

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

** Maximum Sound Pressure Level between 10:00-10:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-BCC2

Location : West of Fence	Monitor Period : 03-10 Mar 2025
SLM Model : Cirrus CR161B	Serial No : G301333
Site Operator : Mr. Siwanon Kulawong	
Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : 02 Oct 2024
SLM Reading / Adjust dB(A) : 93.5/0.2	Expire Date : 01 Oct 2025
Cal Sheet No.: CR-515-2025-053	

Time	L90 (dB(A))						
	03-04 Mar 2025	04-05 Mar 2025	05-06 Mar 2025	06-07 Mar 2025	07-08 Mar 2025	08-09 Mar 2025	09-10 Mar 2025
10:00 - 11:00	62.3	61.9	62.4	62.0	62.1	62.5	63.8
11:00 - 12:00	62.0	61.8	61.8	61.8	61.4	63.3	63.1
12:00 - 13:00	61.0	61.5	60.9	61.5	61.2	62.0	61.8
13:00 - 14:00	61.2	60.7	61.4	61.4	61.4	62.0	61.8
14:00 - 15:00	60.8	60.4	60.8	61.0	61.4	62.2	61.6
15:00 - 16:00	60.8	60.5	60.6	60.8	61.1	61.4	60.8
16:00 - 17:00	61.4	60.7	60.4	60.9	62.4	62.5	60.7
17:00 - 18:00	62.0	61.4	60.7	61.5	62.8	62.3	61.5
18:00 - 19:00	61.9	62.1	61.9	61.8	63.8	63.0	62.0
19:00 - 20:00	62.0	62.3	62.2	62.2	62.9	62.6	62.4
20:00 - 21:00	62.0	62.7	62.4	62.2	62.8	63.1	63.1
21:00 - 22:00	62.0	62.2	62.8	62.3	63.0	62.9	63.0
22:00 - 23:00	62.5	62.3	62.4	62.5	63.3	63.1	63.0
23:00 - 00:00	62.3	62.0	62.2	62.1	63.0	62.9	63.4
00:00 - 01:00	62.3	62.2	62.4	62.2	63.3	63.6	63.5
01:00 - 02:00	62.4	61.9	62.4	62.1	62.7	63.2	63.3
02:00 - 03:00	62.3	62.2	63.0	62.3	62.9	63.1	63.1
03:00 - 04:00	62.3	62.5	62.7	62.3	62.8	63.2	63.3
04:00 - 05:00	62.6	62.3	62.8	62.6	62.6	63.0	63.6
05:00 - 06:00	62.4	62.6	62.6	62.3	62.7	63.1	63.3
06:00 - 07:00	62.6	62.4	62.4	62.5	62.8	63.3	63.2
07:00 - 08:00	62.2	62.0	62.2	62.5	62.9	63.0	62.7
08:00 - 09:00	61.9	62.0	61.9	62.1	62.5	63.0	61.9
09:00 - 10:00	61.9	61.9	62.2	61.9	62.3	62.9	62.2

L90(avg)*	62.0	61.9	62.0	62.0	62.6	62.8	62.7
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Remark : * Average time between 10:00-10:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

ภาคผนวก ง.4

ใบรับรองผลการตรวจวิเคราะห์คุณภาพน้ำทิ้ง



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

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Bangkok Cogeneration Co., Ltd. (BCC 2) REQUEST SERVICE No. : 0031/68
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 08/01/2025 SAMPLING TIME : 09:45
RECEIVED DATE : 09/01/2025 ANALYTICAL DATE : 09-14/01/2025
REPORT DATE : 15/01/2025 SITE OPERATOR : Miss Thipsuda Wannakran
SAMPLE CONDITION : Normal FILE CODE : 225004_WW_January

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ^{1/}
		METHODS	(non-detectable)	บ่อพักน้ำทิ้งของโครงการ	
Flow Rate*	m ³ /hr	-	-	14	-
Temperature	°C	2550 B	< 0.5	31.0	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.60	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	1,997	≤ 3,000
Total Suspended Solids	mg/l	2540 D	< 2.5	7.2	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5

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

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ท-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ท-0004

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

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3. ^{1/} Notification of the Ministry of the Natural Resources and Environment, B.E.2565 (2022).

4. *Not registered with the Department of Industrial Works.

5. - Not available .



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Bangkok Cogeneration Co., Ltd. (BCC 2) REQUEST SERVICE No. : 0173/68
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 05/02/2025 SAMPLING TIME : 08:52
RECEIVED DATE : 06/02/2025 ANALYTICAL DATE : 06-11/02/2025
REPORT DATE : 13/02/2025 SITE OPERATOR : Mr.Tanachot Changlor
SAMPLE CONDITION : Normal FILE CODE : 225004_WW_February

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ^{1/}
		METHODS	(non-detectable)	บ่อพักน้ำทิ้งของโครงการ	
Flow Rate*	m ³ /hr	-	-	20	-
Temperature	°C	2550 B	< 0.5	33.2	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.17	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	1,841	≤ 3,000
Total Suspended Solids	mg/l	2540 D	< 2.5	6.5	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5

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

(Miss Khemchuda Insorn)

Analyst

REG. NO. 7-239-ท-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-ท-0004

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Bangkok Cogeneration Co., Ltd. (BCC 2) REQUEST SERVICE No. : 0383/68
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 05/03/2025 SAMPLING TIME : 08:47
RECEIVED DATE : 06/03/2025 ANALYTICAL DATE : 06-13/03/2025
REPORT DATE : 14/03/2025 SITE OPERATOR : Mr. Tanachot Changlor
SAMPLE CONDITION : Normal FILE CODE : 225004_WW_March

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ^{1/}
		METHODS	(non-detectable)	บ่อพักน้ำทิ้งของโครงการ	
Flow Rate*	m ³ /hr	-	-	19	-
Temperature	°C	2550 B	< 0.5	35.2	≤ 40
pH	-	4500-H ⁺ B	< 0.10	8.02	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	1,964	≤ 3,000
Total Suspended Solids	mg/l	2540 D	< 2.5	5.6	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5

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

(Miss Khemchuda Insorn)

Analyst

REG. NO. ๖-239-ท-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. ๖-239-ท-0004

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Bangkok Cogeneration Co., Ltd. (BCC 2) REQUEST SERVICE No. : 0591/68
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 02/04/2025 SAMPLING TIME : 08:47
RECEIVED DATE : 03/04/2025 ANALYTICAL DATE : 03-08/04/2025
REPORT DATE : 09/04/2025 SITE OPERATOR : Miss Salisa Ainree
SAMPLE CONDITION : Normal FILE CODE : 225004_WW_April

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ^{1/}
		METHODS	(non-detectable)	บ่อพักน้ำทิ้งของโครงการ	
Flow Rate*	m ³ /hr	-	-	14	-
Temperature	°C	2550 B	< 0.5	32.7	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.94	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	1,704	≤ 3,000
Total Suspended Solids	mg/l	2540 D	< 2.5	5.8	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5

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

(Miss Khemchuda Insorn)

Analyst

REG. NO. ๖-239-ท-0005

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. ๖-239-ท-0004

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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Bangkok Cogeneration Co., Ltd. (BCC 2) REQUEST SERVICE No. : 0800/68
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 07/05/2025 SAMPLING TIME : 10:05
RECEIVED DATE : 08/05/2025 ANALYTICAL DATE : 08-15/05/2025
REPORT DATE : 16/05/2025 SITE OPERATOR : Miss Wiraya Patchimboon
SAMPLE CONDITION : Normal FILE CODE : 225004_WW_May

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION บ่อพักน้ำทิ้งของโครงการ	STANDARD ^{1/}
Flow Rate*	m ³ /hr	-	-	15	-
Temperature	°C	2550 B	< 0.5	33.1	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.88	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	1,578	≤ 3,000
Total Suspended Solids	mg/l	2540 D	< 2.5	3.8	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-0005

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

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SECOT CO., LTD.

239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพมหานคร 10800
239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND
TEL. (662) 959-3600 FAX (662) 959-3535 Website : secot.co.th E-mail : envserv@secot.co.th

WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME : Bangkok Cogeneration Co., Ltd. (BCC 2) REQUEST SERVICE No. : 1012/68
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Grab
SAMPLING DATE : 04/06/2025 SAMPLING TIME : 08:30
RECEIVED DATE : 05/06/2025 ANALYTICAL DATE : 05-12/06/2025
REPORT DATE : 12/06/2025 SITE OPERATOR : Mr.Thanawut Duansaeng
SAMPLE CONDITION : Normal FILE CODE : 225004_WW_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION บ่อพักน้ำทิ้งของโครงการ	STANDARD ^{1/}
Flow Rate*	m ³ /hr	-	-	14	-
Temperature	°C	2550 B	< 0.5	34.2	≤ 40
pH	-	4500-H ⁺ B	< 0.10	7.82	5.5-9.0
Total Dissolved Solids	mg/l	2540 C	< 25	2,148	≤ 3,000
Total Suspended Solids	mg/l	2540 D	< 2.5	6.0	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 2.0	ND	≤ 5

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

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 2-239-ก-0005

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-ก-0004

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. ^{1/} Notification of the Ministry of the Natural Resources and Environment, B.E.2565 (2022).
 4. *Not registered with the Department of Industrial Works.
 5. - Not available .

ภาคผนวก ง.5

ใบรับรองผลการตรวจวัดระดับเสียงในพื้นที่ปฏิบัติงาน



Noise Monitoring Result : Working Noise

MTR-BCC2

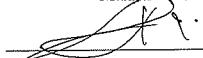
Location : Gas Turbine Generator No.11	Monitor Period : Apr 02, 2025
SLM Model : SCARLET ST-21D	Serial No : 820726
Site Operator : Miss Salisa Ainree	

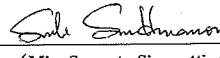
Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : Oct 02 2024
SLM Reading / Adjust dB(A) : 93.8/0.0	Expire Date : Oct 01 2025
Cal Sheet No.: CR-515-2025-079	

Time	Equivalent Sound Pressure Level (dB(A))
	Apr 02, 2025
00:00 - 01:00	
01:00 - 02:00	
02:00 - 03:00	
03:00 - 04:00	
04:00 - 05:00	
05:00 - 06:00	
06:00 - 07:00	
07:00 - 08:00	74.4
08:00 - 09:00	73.5
09:00 - 10:00	73.6
10:00 - 11:00	73.3
11:00 - 12:00	74.0
12:00 - 13:00	73.4
13:00 - 14:00	73.5
14:00 - 15:00	74.1
15:00 - 16:00	73.4
16:00 - 17:00	73.5
17:00 - 18:00	73.6
18:00 - 19:00	74.9
19:00 - 20:00	
20:00 - 21:00	
21:00 - 22:00	
22:00 - 23:00	
23:00 - 24:00	
Leq(12)*	73.8
Lmax **	101.4
Standard-12Hr	87 dB(A)
Standard-Max	140 dB(A)

Remark : * Average time between 07:00-19:00

** Maximum Sound Pressure Level between 07:00-19:00


(Miss Katesarin Vorradetwittaya)
Environmental Scientist


(Miss Sununta Sirawuttinanon)
Technical Management Team



Noise Monitoring Result : Working Noise

MTR-BCC2


Location : Gas Turbine Generator No.12	Monitor Period : Apr 02, 2025
SLM Model : SCARLET ST-21D	Serial No : 820723
Site Operator : Miss Salisa Ainree	

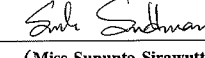
Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : Oct 02 2024
SLM Reading / Adjust dB(A) : 93.8/0.0	Expire Date : Oct 01 2025
Cal Sheet No.: CR-515-2025-079	

Time	Equivalent Sound Pressure Level (dB(A))
	Apr 02, 2025
00:00 - 01:00	
01:00 - 02:00	
02:00 - 03:00	
03:00 - 04:00	
04:00 - 05:00	
05:00 - 06:00	
06:00 - 07:00	
07:00 - 08:00	76.3
08:00 - 09:00	75.8
09:00 - 10:00	76.1
10:00 - 11:00	75.6
11:00 - 12:00	78.5
12:00 - 13:00	76.9
13:00 - 14:00	77.2
14:00 - 15:00	77.0
15:00 - 16:00	77.0
16:00 - 17:00	77.1
17:00 - 18:00	76.9
18:00 - 19:00	77.1
19:00 - 20:00	
20:00 - 21:00	
21:00 - 22:00	
22:00 - 23:00	
23:00 - 24:00	
Leq(12)*	76.9
Lmax **	100.3
Standard-12Hr	87 dB(A)
Standard-Max	140 dB(A)

Remark : * Average time between 07:00-19:00

** Maximum Sound Pressure Level between 07:00-19:00


(Miss Katesarin Vorradetwittaya)
Environmental Scientist


(Miss Sununta Sirawuttinanon)
Technical Management Team



Noise Monitoring Result : Working Noise


MTR-BCC2


Location : Steam Turbine Generator	Monitor Period : Apr 02, 2025
SLM Model : SCARLET ST-21D	Serial No : 820725
Site Operator : Miss Salisa Ainree	
Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : Oct 02 2024
SLM Reading / Adjust dB(A) : 93.8/0.0	Expire Date : Oct 01 2025
Cal Sheet No.: CR-515-2025-079	

Time	Equivalent Sound Pressure Level (dB(A))
	Apr 02, 2025
00:00 - 01:00	
01:00 - 02:00	
02:00 - 03:00	
03:00 - 04:00	
04:00 - 05:00	
05:00 - 06:00	
06:00 - 07:00	
07:00 - 08:00	84.6
08:00 - 09:00	84.0
09:00 - 10:00	84.0
10:00 - 11:00	84.2
11:00 - 12:00	84.4
12:00 - 13:00	83.9
13:00 - 14:00	84.0
14:00 - 15:00	83.8
15:00 - 16:00	82.8
16:00 - 17:00	82.9
17:00 - 18:00	83.4
18:00 - 19:00	84.6
19:00 - 20:00	
20:00 - 21:00	
21:00 - 22:00	
22:00 - 23:00	
23:00 - 24:00	
Leq(12)*	83.9
Lmax **	108.4
Standard-12Hr	87 dB(A)
Standard-Max	140 dB(A)

Remark : * Average time between 07:00-19:00

** Maximum Sound Pressure Level between 07:00-19:00


(Miss Katesarin Vorradetwittaya)
Environmental Scientist


(Miss Sununta Sirawuttinanon)
Technical Management Team



Noise Monitoring Result : Working Noise


MTR-BCC2


Location : Auxiliary Boiler	Monitor Period : Apr 02, 2025
SLM Model : SCARLET ST-21D	Serial No : 820722
Site Operator : Miss Salisa Ainree	
Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : Oct 02 2024
SLM Reading / Adjust dB(A) : 93.8/0.0	Expire Date : Oct 01 2025
Cal Sheet No.: CR-515-2025-079	

Time	Equivalent Sound Pressure Level (dB(A))
	Apr 02, 2025
00:00 - 01:00	
01:00 - 02:00	
02:00 - 03:00	
03:00 - 04:00	
04:00 - 05:00	
05:00 - 06:00	
06:00 - 07:00	
07:00 - 08:00	69.2
08:00 - 09:00	60.5
09:00 - 10:00	73.0
10:00 - 11:00	65.5
11:00 - 12:00	64.5
12:00 - 13:00	61.0
13:00 - 14:00	60.3
14:00 - 15:00	60.9
15:00 - 16:00	63.3
16:00 - 17:00	61.2
17:00 - 18:00	61.5
18:00 - 19:00	61.3
19:00 - 20:00	
20:00 - 21:00	
21:00 - 22:00	
22:00 - 23:00	
23:00 - 24:00	
Leq(12)*	65.8
Lmax **	105.3
Standard-12Hr	87 dB(A)
Standard-Max	140 dB(A)

Remark : * Average time between 07:00-19:00

** Maximum Sound Pressure Level between 07:00-19:00


(Miss Katesarin Vorradetwittaya)
Environmental Scientist


(Miss Sununta Sirawuttinanon)
Technical Management Team



Noise Monitoring Result : Working Noise

MTR-BCC2

Location : Gas Turbine Generator No.11 Monitor Period : Apr 02, 2025
 SLM Model : SCARLET ST-21D Serial No : 820726
 Site Operator : Miss Salisa Ainree

Calibrator Model : Cirrus CR:515 Serial No : 97097
 Calibration Ref dB(A) : 94.0 Certified Date : Oct 02 2024
 SLM Reading / Adjust dB(A) : 93.8/0.0 Expire Date : Oct 01 2025
 Cal Sheet No.: CR-515-2025-079

Time	Equivalent Sound Pressure Level (dB(A))
	Apr 02, 2025
00:00 - 01:00	
01:00 - 02:00	
02:00 - 03:00	
03:00 - 04:00	
04:00 - 05:00	
05:00 - 06:00	
06:00 - 07:00	
07:00 - 08:00	74.4
08:00 - 09:00	73.5
09:00 - 10:00	73.6
10:00 - 11:00	73.3
11:00 - 12:00	74.0
12:00 - 13:00	73.4
13:00 - 14:00	73.5
14:00 - 15:00	74.1
15:00 - 16:00	
16:00 - 17:00	
17:00 - 18:00	
18:00 - 19:00	
19:00 - 20:00	
20:00 - 21:00	
21:00 - 22:00	
22:00 - 23:00	
23:00 - 24:00	
Leq(8)*	73.7
Lmax **	101.4
Standard-8Hr	90 dB(A)
Standard-Max	140 dB(A)

Remark : * Average time between 07:00-15:00

** Maximum Sound Pressure Level between 07:00-15:00

(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

(Miss Sununta Sirawuttinanon)
 Technical Management Team



Noise Monitoring Result : Working Noise

MTR-BCC2

Location : Gas Turbine Generator No.12 Monitor Period : Apr 02, 2025
 SLM Model : SCARLET ST-21D Serial No : 820723
 Site Operator : Miss Salisa Ainree

Calibrator Model : Cirrus CR:515 Serial No : 97097
 Calibration Ref dB(A) : 94.0 Certified Date : Oct 02 2024
 SLM Reading / Adjust dB(A) : 93.8/0.0 Expire Date : Oct 01 2025
 Cal Sheet No.: CR-515-2025-079

Time	Equivalent Sound Pressure Level (dB(A))
	Apr 02, 2025
00:00 - 01:00	
01:00 - 02:00	
02:00 - 03:00	
03:00 - 04:00	
04:00 - 05:00	
05:00 - 06:00	
06:00 - 07:00	
07:00 - 08:00	76.3
08:00 - 09:00	75.8
09:00 - 10:00	76.1
10:00 - 11:00	75.6
11:00 - 12:00	78.5
12:00 - 13:00	76.9
13:00 - 14:00	77.2
14:00 - 15:00	77.0
15:00 - 16:00	
16:00 - 17:00	
17:00 - 18:00	
18:00 - 19:00	
19:00 - 20:00	
20:00 - 21:00	
21:00 - 22:00	
22:00 - 23:00	
23:00 - 24:00	
Leq(8)*	76.8
Lmax **	100.3
Standard-8Hr	90 dB(A)
Standard-Max	140 dB(A)

Remark : * Average time between 07:00-15:00

** Maximum Sound Pressure Level between 07:00-15:00

(Miss Katesarin Vorradetwittaya)
 Environmental Scientist

(Miss Sununta Sirawuttinanon)
 Technical Management Team



Noise Monitoring Result : Working Noise

MTR-BCC2

Location : Steam Turbine Generator	Monitor Period : Apr 02, 2025
SLM Model : SCARLET ST-21D	Serial No : 820725
Site Operator : Miss Salisa Ainree	

Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : Oct 02 2024
SLM Reading / Adjust dB(A) : 93.8/0.0	Expire Date : Oct 01 2025
Cal Sheet No.: CR-515-2025-079	

Time	Equivalent Sound Pressure Level (dB(A))
	Apr 02, 2025
00:00 - 01:00	
01:00 - 02:00	
02:00 - 03:00	
03:00 - 04:00	
04:00 - 05:00	
05:00 - 06:00	
06:00 - 07:00	
07:00 - 08:00	84.6
08:00 - 09:00	84.0
09:00 - 10:00	84.0
10:00 - 11:00	84.2
11:00 - 12:00	84.4
12:00 - 13:00	83.9
13:00 - 14:00	84.0
14:00 - 15:00	83.8
15:00 - 16:00	
16:00 - 17:00	
17:00 - 18:00	
18:00 - 19:00	
19:00 - 20:00	
20:00 - 21:00	
21:00 - 22:00	
22:00 - 23:00	
23:00 - 24:00	

Leq(8)*	84.1
Lmax **	108.4

Standard-8Hr	90 dB(A)
Standard-Max	140 dB(A)

Remark : * Average time between 07:00-15:00

** Maximum Sound Pressure Level between 07:00-15:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Sununta Sirawuttinanon)
Technical Management Team



Noise Monitoring Result : Working Noise

MTR-BCC2

Location : Auxiliary Boiler	Monitor Period : Apr 02, 2025
SLM Model : SCARLET ST-21D	Serial No : 820722
Site Operator : Miss Salisa Ainree	

Calibrator Model : Cirrus CR:515	Serial No : 97097
Calibration Ref dB(A) : 94.0	Certified Date : Oct 02 2024
SLM Reading / Adjust dB(A) : 93.8/0.0	Expire Date : Oct 01 2025
Cal Sheet No.: CR-515-2025-079	

Time	Equivalent Sound Pressure Level (dB(A))
	Apr 02, 2025
00:00 - 01:00	
01:00 - 02:00	
02:00 - 03:00	
03:00 - 04:00	
04:00 - 05:00	
05:00 - 06:00	
06:00 - 07:00	
07:00 - 08:00	69.2
08:00 - 09:00	60.5
09:00 - 10:00	73.0
10:00 - 11:00	65.5
11:00 - 12:00	64.5
12:00 - 13:00	61.0
13:00 - 14:00	60.3
14:00 - 15:00	60.9
15:00 - 16:00	
16:00 - 17:00	
17:00 - 18:00	
18:00 - 19:00	
19:00 - 20:00	
20:00 - 21:00	
21:00 - 22:00	
22:00 - 23:00	
23:00 - 24:00	

Leq(8)*	66.9
Lmax **	105.3

Standard-8Hr	90 dB(A)
Standard-Max	140 dB(A)

Remark : * Average time between 07:00-15:00

** Maximum Sound Pressure Level between 07:00-15:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Sununta Sirawuttinanon)
Technical Management Team

ภาคผนวก ง.6

ใบรับรองผลการตรวจวัดระดับเสียงเฉลี่ยตลอดระยะเวลาการทำงาน



บริษัท ซีคอต จำกัด
SECOT CO., LTD.

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

NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME : Bangkok Cogeneration Co., Ltd. (BCC2) REFERENCE NO. : 225004_Cert-Noise Dose/Apr 25
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter
MEASUREMENT DATE : 02/04/2025 CALIBRATOR TYPE : RC 110A
MEASUREMENT LOCATION : Cogeneration Energy Facility, Branch 2 SERIAL NO. : 95167
SITE OPERATOR : Ms. Salisa Ainree CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	RESPONSIBILITY/AREA	TIME	% DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (12 hr)	STANDARD*
2100595	Operator Production	07.59-19.00	18.6	76.0	83.0

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Sirawuttinanon)

Technical Management Team

- Remark :**
1. Reported analysis refers to submitted sample only.
 2. This report shall not be reproduced, except in full, without official approval.
 3. *Notification of the Department of Labour Protection and Welfare, B.E.2561 (2018).
 4. TWA means Time Weighted Average.



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SECOT CO., LTD.

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239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND
TEL : +66(0) 2959-3600 FAX : +66(0) 2959-3535 E-mail : envserv@secot.co.th

NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME : Bangkok Cogeneration Co., Ltd. (BCC2) REFERENCE NO. : 225004_Cert-Noise Dose/Apr 25
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : Noise Dosimeter
MEASUREMENT DATE : 02/04/2025 CALIBRATOR TYPE : RC 110A
MEASUREMENT LOCATION : Cogeneration Energy Facility, Branch 2 SERIAL NO. : 95167
SITE OPERATOR : Ms. Salisa Ainree CALIBRATOR REF. : 114 dB @1,000 Hz

OPERATOR ID	RESPONSIBILITY/AREA	TIME	% DOSE	SOUND PRESSURE LEVEL (dBA)	
				TWA (8 hr)	STANDARD*
0800398	Operator Maintenance	07.58-15.58	3.9	70.9	85.0

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Sirawuttinanon)

Technical Management Team

- Remark :**
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 3. *Notification of the Department of Labour Protection and Welfare, B.E.2561 (2018).
 4. TWA means Time Weighted Average.

ภาคผนวก ง.7

ใบรับรองผลการตรวจวัดระดับความร้อนในพื้นที่ปฏิบัติงาน



บริษัท ซีคอต จำกัด
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239 ถนนริมคลองประปา แขวงบางซื่อ เขตบางซื่อ กรุงเทพฯ 10800

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HEAT STRESS MEASUREMENT REPORT

CLIENT NAME : Bangkok Cogeneration Co., Ltd. REFERENCE NO. : 225004-Heat (Cert)/WBGT-Apr 2025
(BCC2)
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : WBGT Meter
MEASUREMENT DATE : 02/04/2025 MODEL NO. : JT2011-E2A
SITE OPERATOR : Ms. Salisa Ainree SERIAL NO. : 3522210178

LOCATION	TIME	MEASURED TEMPERATURE (°C)					STANDARD (°C) *
		NWB	DB	GT	WBGT _{out}	WBGT _{Avg}	
HRSG 11	12.27-12.57	26.2	29.1	29.8	27.2	28.0	34.0
	12.57-13.27	26.8	30.0	31.1	28.0		
	13.27-13.57	27.0	30.6	31.1	28.2		
	13.57-14.27	27.1	31.2	32.3	28.6		

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Sirawuttinanon)

Technical Management Team

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

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3. * WBGT standard was notified by the Ministerial Regulations of Labour, B.E.2559 (2016).

4. NWB = Natural Wet Bulb Temperature

DB = Dry Bulb Temperature

GT = Globe Temperature

WBGT = Wet Bulb Globe Temperature

5. Work Load - Light work load = 34°C, Moderate work load = 32°C and Heavy work load = 30°C



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HEAT STRESS MEASUREMENT REPORT

CLIENT NAME : Bangkok Cogeneration Co., Ltd. REFERENCE NO. : 225004-Heat (Cert)/WBGT-Apr 2025
(BCC2)
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : WBGT Meter
MEASUREMENT DATE : 02/04/2025 MODEL NO. : JT2011-E2A
SITE OPERATOR : Ms. Salisa Ainree SERIAL NO. : 3522210177

LOCATION	TIME	MEASURED TEMPERATURE (°C)					STANDARD (°C) *
		NWB	DB	GT	WBGT _{out}	WBGT _{Avg}	
HRSG 12	12.23-12.53	26.6	29.4	30.0	27.6	28.3	34.0
	12.53-13.23	27.0	30.3	31.4	28.2		
	13.23-13.53	27.2	30.8	31.8	28.5		
	13.53-14.23	27.4	31.9	32.8	28.9		

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Sirawuttinanon)

Technical Management Team

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4. NWB = Natural Wet Bulb Temperature

DB = Dry Bulb Temperature

GT = Globe Temperature

WBGT = Wet Bulb Globe Temperature

5. Work Load - Light work load = 34°C, Moderate work load = 32°C and Heavy work load = 30°C



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239 RIMKLONGPRAPA ROAD, BANGSUE, BANGKOK 10800, THAILAND

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

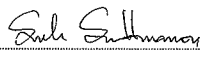
HEAT STRESS MEASUREMENT REPORT

CLIENT NAME : Bangkok Cogeneration Co., Ltd. REFERENCE NO. : 225004-Heat (Cert)/WBGT-Apr 2025
(BCC2)
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : WBGT Meter
MEASUREMENT DATE : 02/04/2025 MODEL NO. : JT2011-E2A
SITE OPERATOR : Ms. Salisa Ainree SERIAL NO. : 3522210181

LOCATION	TIME	MEASURED TEMPERATURE (°C)					STANDARD (°C) *
		NWB	DB	GT	WBGT _{in}	WBGT _{Avg}	
Steam Turbine Generator	12.03-12.33	27.0	30.6	30.9	28.2	28.7	34.0
	12.33-13.03	27.3	30.9	31.0	28.4		
	13.03-13.33	27.6	31.7	32.2	29.0		
	13.33-14.03	27.6	32.1	32.4	29.0		


(Miss Katesarin Vorradetwittaya)

Environmental Scientist


(Miss Sununta Sirawuttinanon)

Technical Management Team

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3. * WBGT standard was notified by the Ministerial Regulations of Labour, B.E.2559 (2016).

4. NWB = Natural Wet Bulb Temperature

DB = Dry Bulb Temperature

GT = Globe Temperature

WBGT = Wet Bulb Globe Temperature

5. Work Load - Light work load = 34°C, Moderate work load = 32°C and Heavy work load = 30°C



บริษัท ซีคอต จำกัด
SECOT CO., LTD.

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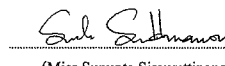
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CLIENT NAME : Bangkok Cogeneration Co., Ltd. REFERENCE NO. : 225004-Heat (Cert)/WBGT-Apr 2025
(BCC2)
MEASUREMENT BY : SECOT Co., Ltd. INSTRUMENT : WBGT Meter
MEASUREMENT DATE : 02/04/2025 MODEL NO. : JT2011-E2A
SITE OPERATOR : Ms. Salisa Ainree SERIAL NO. : 3522210179

LOCATION	TIME	MEASURED TEMPERATURE (°C)					STANDARD (°C) *
		NWB	DB	GT	WBGT _{out}	WBGT _{Avg}	
Auxiliary Boiler	12.31-13.01	26.6	30.3	30.8	27.8	28.5	34.0
	13.01-13.31	26.7	30.6	31.3	28.0		
	13.31-14.01	27.6	31.5	32.9	29.1		
	14.01-14.31	27.6	31.6	32.5	29.0		


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DB = Dry Bulb Temperature

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ภาคผนวก ง.8

ใบรับรองผลการตรวจวัดความเข้มของแสงสว่าง
ภายในสถานประกอบการ



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LIGHT INTENSITY MEASUREMENT REPORT

CLIENT NAME	: Bangkok Cogeneration Co., Ltd. (BCC2)	REFERENCE NO.	: Cert-225004/Light-Day/Apr 25
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Digital Light Meter
MEASUREMENT DATE	: 02/04/2025	MODEL	: 407026
MEASUREMENT LOCATION	: Cogeneration Energy Facility, Branch 2	SERIAL NO.	: A 051050
SITE OPERATOR	: Ms. Salisa Ainree		

LOCATION	DATE	TIME	LIGHT INTENSITY (LUX)			
			AVERAGE VALUE	STANDARD*	MINIMUM VALUE	STANDARD*
<u>Office 1st Floor</u>						
ห้องประชุม 3	02/04/2025	08.12	419	≥ 300	401	≥ 150
ห้องอาหาร	02/04/2025	08.16	648	≥ 300	356	≥ 150
ทางเดิน ชั้น 1	02/04/2025	08.12	403	≥ 100	222	≥ 50
<u>Office 2nd Floor</u>						
ห้องประชุม 1	02/04/2025	07.50	707	≥ 300	483	≥ 150
ห้องประชุม 2	02/04/2025	07.52	1,187	≥ 300	1,026	≥ 150
ทางเดินหน้าห้องประชุม 2	02/04/2025	08.07	517	≥ 100	473	≥ 50
ทางเดิน ชั้น 2	02/04/2025	08.08	251	≥ 100	179	≥ 50
ทางเดินหน้าบันได ชั้น 2	02/04/2025	08.09	450	≥ 100	312	≥ 50
ทางเดินหน้า CCR ชั้น 2	02/04/2025	08.06	288	≥ 100	286	≥ 50

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

(Miss Sununta Sirawuttinanon)

Technical Management Team

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 3. * Notification of the Department of Labour Protection and Welfare, B.E.2561 (2018) :

The standards of light intensity in general area and process area (Table 1).



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CLIENT NAME	: Bangkok Cogeneration Co., Ltd. (BCC2)	REFERENCE NO.	: Cert-225004/Light-Day/Apr 25
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Digital Light Meter
MEASUREMENT DATE	: 02/04/2025	MODEL	: 407026
MEASUREMENT LOCATION	: Cogeneration Energy Facility, Branch 2	SERIAL NO.	: A 051050
SITE OPERATOR	: Ms. Salisa Ainree		

LOCATION	DATE	TIME	LIGHT INTENSITY (LUX)	
			RESULTS	STANDARD*
Office 2 nd Floor				
โต๊ะ Control Panel 1	02/04/2025	07.54	803	400-500
โต๊ะ Control Panel 2	02/04/2025	07.54	801	400-500
โต๊ะ Control Panel 3	02/04/2025	07.54	862	400-500
โต๊ะ Control Panel 4	02/04/2025	07.54	864	400-500
โต๊ะ Shift Sup.	02/04/2025	07.54	488	400-500
โต๊ะทำงาน 1 (ว่าง)	02/04/2025	07.55	416	400-500
โต๊ะทำงานคุณชุตติกาญจน์	02/04/2025	07.55	447	400-500
โต๊ะทำงานคุณชนกพร	02/04/2025	07.55	861	400-500
โต๊ะทำงานคุณพิภพ	02/04/2025	07.55	861	400-500
โต๊ะทำงานคุณสุภักดิ์	02/04/2025	07.55	855	400-500
โต๊ะทำงานคุณทวีทรัพย์	02/04/2025	07.55	873	400-500
โต๊ะทำงานคุณสมเกียรติ	02/04/2025	07.56	902	400-500

(Miss Katesarin Vorradetwittaya)

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The standards of light intensity for employee in working area using specific sighting for working (Table 2).



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SECOT CO., LTD.

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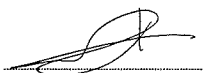
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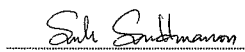
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CLIENT NAME	: Bangkok Cogeneration Co., Ltd. (BCC2)	REFERENCE NO.	: Cert-225004/Light-Day/Apr 25
MEASUREMENT BY	: SECOT Co., Ltd.	INSTRUMENT	: Digital Light Meter
MEASUREMENT DATE	: 02/04/2025	MODEL	: 407026
MEASUREMENT LOCATION	: Cogeneration Energy Facility, Branch 2	SERIAL NO.	: A 051050
SITE OPERATOR	: Ms. Salisa Ainree		

LOCATION	DATE	TIME	LIGHT INTENSITY (LUX)	
			RESULTS	STANDARD*
Office 2 nd Floor (ต่อ)				
โต๊ะทำงานคุณยุทธพงษ์	02/04/2025	07.56	967	400-500
โต๊ะทำงานคุณกุลธรรดา	02/04/2025	07.56	416	400-500
โต๊ะทำงานคุณฉัฐนิชา	02/04/2025	07.56	449	400-500
โต๊ะทำงาน 2 (ว่าง)	02/04/2025	07.56	467	400-500
โต๊ะทำงาน 3 (ว่าง)	02/04/2025	07.56	503	400-500
โต๊ะทำงาน 4 (ว่าง)	02/04/2025	07.56	481	400-500
โต๊ะทำงานคุณนพรัตน์	02/04/2025	07.56	511	400-500


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The standards of light intensity for employee in working area using specific sighting for working (Table 2).

ภาคผนวก จ

ใบแสดงการตรวจเทียบเครื่องมือ



High Volume TSP&PM-10 Calibration Report

Date: 15-Jan-25

Ta (°C): 33

Pa (mm Hg): 759

Orifice Transfer Standard Calibration

Equipment: Orifice
 Model No: TE-5025A
 Serial No: 3674
 Manufacturer: TISCH
 Slope (m): 2.14057
 Intercept (b): -0.07783

Unit Under Test

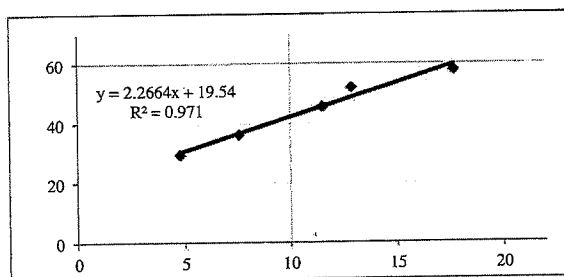
Equipment: High-vol pump
 Model No: TE-5005X
 Serial No: BH-002

High Volume TSP&PM-10 Calibration Report

Plate	TRUE (in H ₂ O)	Indicate (X) (cm H ₂ O)	Actual Flow (Y) (cfm)	Remark
18	12.04	17.70	57.740	
13	9.71	12.88	51.984	
10	7.41	11.51	45.574	
7	4.62	7.57	36.256	
5	3.01	4.78	29.512	

Linear Regression

Slope: 2.2664
 Intercept: 19.5402
 Corr. Coeff: 0.9854
 Flow PM-10: 9.0276
 Flow TSP: 13.4399



Calibrated by: Wuthaya K.

Approved by: [Signature]



High Volume TSP&PM-10 Calibration Report

Date: 13-Jan-25

Ta (°C): 19

Pa (mm Hg): 763

Orifice Transfer Standard Calibration

Equipment: Orifice
 Model No: TE-5025A
 Serial No: 3674
 Manufacturer: TISCH
 Slope (m): 2.14057
 Intercept (b): -0.07783

Unit Under Test

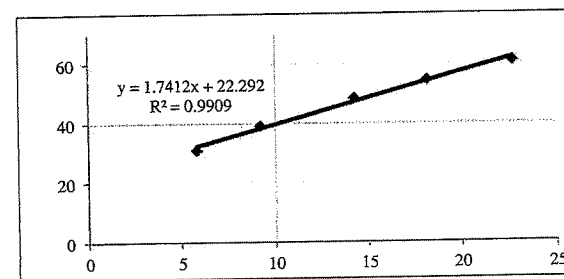
Equipment: High-vol pump
 Model No: TE-5005X
 Serial No: BH-005

High Volume TSP&PM-10 Calibration Report

Plate	TRUE (in H ₂ O)	Indicate (X) (cm H ₂ O)	Actual Flow (Y) (cfm)	Remark
18	12.7	22.71	60.796	
13	10.1	18.19	54.355	
10	7.91	14.25	48.251	
7	5.14	9.19	39.144	
5	3.18	5.82	31.063	

Linear Regression

Slope: 1.7412
 Intercept: 22.2916
 Corr. Coeff: 0.9955
 Flow PM-10: 10.1705
 Flow TSP: 15.9137



Calibrated by: Wuthaya K.

Approved by: [Signature]



High Volume TSP&PM-10 Calibration Report

Date:

13-Jan-25

Ta (°C):

28

Pa (mm Hg)

759

Orifice Transfer Standard Calibration

Equipment: Orifice
 Model No: TE-5025A
 Serial No: 3674
 Manufacturer: TISCH
 Slope (m): 2.14057
 Intercept (b): -0.07783

Unit Under Test

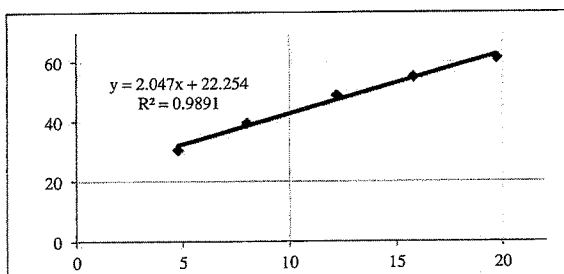
Equipment: High-vol pump
 Model No: TE-5005X
 Serial No: BH-016

High Volume TSP&PM-10 Calibration Report

Plate	TRUE (in H ₂ O)	Indicate (X) (cm H ₂ O)	Actual Flow (Y) (cfm)	Remark
18	13.45	19.74	61.447	
13	10.73	15.80	55.021	
10	8.35	12.22	48.688	
7	5.42	8.00	39.476	
5	3.18	4.78	30.538	

Linear Regression

Slope: 2.0470
 Intercept: 22.2537
 Corr. Coeff: 0.9945
 Flow PM-10: 8.6694
 Flow TSP: 13.5547



Calibrated by:

Witthaya K.

Approved by:



High Volume TSP&PM-10 Calibration Report

Date:

13-Jan-25

Ta (°C):

21

Pa (mm Hg)

763

Orifice Transfer Standard Calibration

Equipment: Orifice
 Model No: TE-5025A
 Serial No: 3674
 Manufacturer: TISCH
 Slope (m): 2.14057
 Intercept (b): -0.07783

Unit Under Test

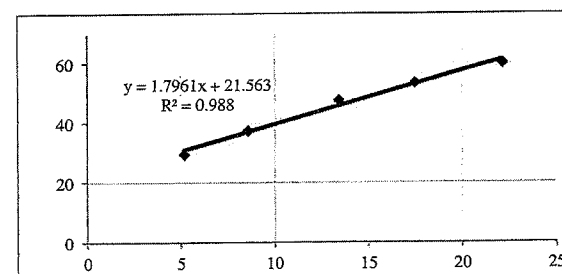
Equipment: High-vol pump
 Model No: TE-5005X
 Serial No: BH-019

High Volume TSP&PM-10 Calibration Report

Plate	TRUE (in H ₂ O)	Indicate (X) (cm H ₂ O)	Actual Flow (Y) (cfm)	Remark
18	12.48	22.12	60.077	
13	9.77	17.50	53.303	
10	7.72	13.41	47.525	
7	4.7	8.56	37.364	
5	2.87	5.18	29.478	

Linear Regression

Slope: 1.7961
 Intercept: 21.5625
 Corr. Coeff: 0.9940
 Flow PM-10: 10.2655
 Flow TSP: 15.8332



Calibrated by:

Witthaya K.

Approved by:



High Volume TSP&PM-10 Calibration Report

Date:

16-Jan-25

Ta (°C):

30

Pa (mm Hg)

760

Orifice Transfer Standard Calibration

Equipment: Orifice
 Model No: TE-5025A
 Serial No: 3674
 Manufacturer: TISCH
 Slope (m): 2.14057
 Intercept (b): -0.07783

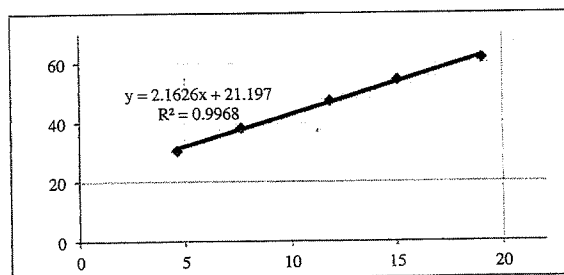
Unit Under Test

Equipment: High-vol pump
 Model No: TE-5005X
 Serial No: BH-021

High Volume TSP&PM-10 Calibration Report

Plate	TRUE (in H ₂ O)	Indicate (X) (cm H ₂ O)	Actual Flow (Y) (cfm)	Remark
18	13.59	19.05	61.599	
13	10.51	15.04	54.326	
10	7.91	11.81	47.300	
7	5.06	7.65	38.088	
5	3.18	4.62	30.460	

Linear Regression



Slope: 2.1626
 Intercept: 21.1967
 Corr. Coeff: 0.9984
 Flow PM-10: 8.6947
 Flow TSP: 13.3188

Calibrated by: Wittaya Kr.Approved by: [Signature]

High Volume TSP&PM-10 Calibration Report

Date:

10-Jan-25

Ta (°C):

25

Pa (mm Hg)

760

Orifice Transfer Standard Calibration

Equipment: Orifice
 Model No: TE-5025A
 Serial No: 3674
 Manufacturer: TISCH
 Slope (m): 2.14057
 Intercept (b): -0.07783

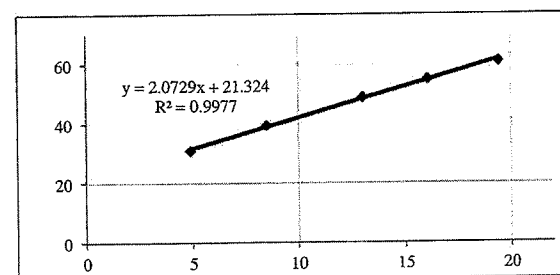
Unit Under Test

Equipment: High-vol pump
 Model No: TE-5005X
 Serial No: BH-022

High Volume TSP&PM-10 Calibration Report

Plate	TRUE (in H ₂ O)	Indicate (X) (cm H ₂ O)	Actual Flow (Y) (cfm)	Remark
18	13.09	19.43	60.974	
13	10.6	16.08	54.997	
10	8.3	13.06	48.814	
7	5.34	8.48	39.408	
5	3.21	4.90	30.843	

Linear Regression



Slope: 2.0729
 Intercept: 21.3239
 Corr. Coeff: 0.9988
 Flow PM-10: 9.0097
 Flow TSP: 13.8339

Calibrated by: Wittaya Kr.Approved by: [Signature]



High Volume TSP&PM-10 Calibration Report

Date:

10-Jan-25

Ta (°C):

30

Pa (mm Hg)

760

Orifice Transfer Standard Calibration

Equipment: Orifice
 Model No: TE-5025A
 Serial No: 3674
 Manufacturer: TISCH
 Slope (m): 2.14057
 Intercept (b): -0.07783

Unit Under Test

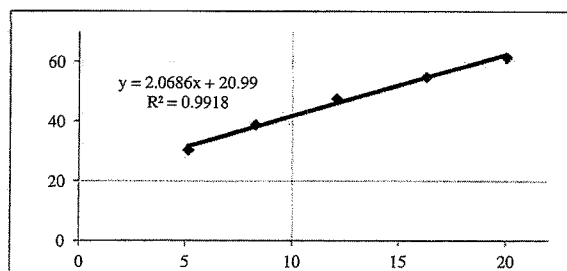
Equipment: High-vol pump
 Model No: TE-5005X
 Serial No: BH-024

High Volume TSP&PM-10 Calibration Report

Plate	TRUE (in H ₂ O)	Indicate (X) (cm H ₂ O)	Actual Flow (Y) (cfm)	Remark
18	13.53	20.02	61.466	
13	10.73	16.31	54.878	
10	7.97	12.09	47.474	
7	5.23	8.28	38.701	
5	3.15	5.13	30.323	

Linear Regression

Slope: 2.0686
 Intercept: 20.9902
 Corr. Coeff: 0.9959
 Flow PM-10: 9.1895
 Flow TSP: 14.0236



Calibrated by:

Withaya K.

Approved by:



High Volume TSP&PM-10 Calibration Report

Date:

14-Jan-25

Ta (°C):

28

Pa (mm Hg)

758

Orifice Transfer Standard Calibration

Equipment: Orifice
 Model No: TE-5025A
 Serial No: 3674
 Manufacturer: TISCH
 Slope (m): 2.14057
 Intercept (b): -0.07783

Unit Under Test

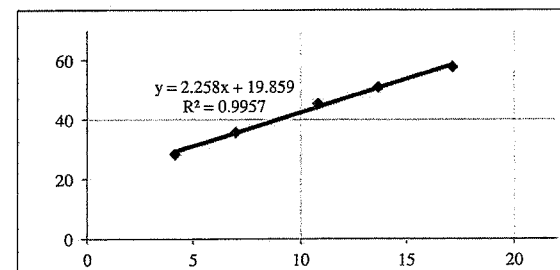
Equipment: High-vol pump
 Model No: TE-5005X
 Serial No: BH-031

High Volume TSP&PM-10 Calibration Report

Plate	TRUE (in H ₂ O)	Indicate (X) (cm H ₂ O)	Actual Flow (Y) (cfm)	Remark
18	11.9	17.15	57.837	
13	9.18	13.69	50.955	
10	7.22	10.82	45.335	
7	4.45	6.96	35.867	
5	2.74	4.14	28.421	

Linear Regression

Slope: 2.2580
 Intercept: 19.8588
 Corr. Coeff: 0.9978
 Flow PM-10: 8.9200
 Flow TSP: 13.3488



Calibrated by:

Withaya K.

Approved by:



CONTROL UNIT CALIBRATION

(Metric units, mm)

Date 6 Jan 25

Initial Final Average
Barometric press, Pb 758 758 758 mmHg

Dry Gas Meter Data

Console No. M50-07

Serial No. 358794

Metering System ID

Model S110

DGM Number 90331

Correction factor (Yr) 1.0077

DGM Model MST-C2-1

Last Calibration Date 25 Oct 24

Calibrated by Montri P.

Orifice manometer setting, ΔH mm H2O	Ref. DGM Volume V _r Liters	DGM Volume V _m Liters	Temperature (°C)				Time Θ min	DGM Correction factor (Y)	ΔH@ mm
			Ref DGM T _r	Dry Gas Meter					
				Inlet T _i	Outlet T _o	Avg T _m			
12.5	100.1	101.0	25	25	24	24.5	8.67	0.9958	42.5842
25.0	99.9	100.8	25	25	24	24.5	6.23	0.9946	44.2513
50.0	100.0	100.9	25	25	24	24.5	4.62	0.9920	48.4414
76.0	100.1	99.3	25	25	24	24.5	3.63	1.0074	45.4868
100.0	100.2	100.7	25	25	24	24.5	3.63	0.9921	47.7831
150.0	99.9	99.4	25	25	24	24.5	2.62	0.9970	46.7598

Average 0.9965 45.8844

Approved by :



PITOT TUBE CALIBRATION REPORT

Calibration Location: SECOT

Calibration Date : 03-01-2025

Calibration Duct No.: CD-0123

Calibration Standard Pitot tube data

Pitot No. : Std-02

Coefficient (Cp) : 0.99

Type S Pitot No. : PS20-01

Calibrated by : Mr. Montri P.

A Side Calibration

Run No.	ΔPstd (mm H ₂ O)	ΔPs (mm H ₂ O)	Cp(s)	Deviation, δ Cp(s) - Cp(A)
1	15.0	21.0	0.8367	-0.0034
2	15.0	20.5	0.8468	0.0068
3	15.0	21.0	0.8367	-0.0034

C_{P(A)} avg 0.8401

B Side Calibration

Run No.	ΔPstd (mm H ₂ O)	ΔPs (mm H ₂ O)	Cp(s)	Deviation, δ Cp(s) - Cp(B)
1	15.0	21.0	0.8367	0.0065
2	15.0	21.5	0.8269	-0.0033
3	15.0	21.5	0.8269	-0.0033

C_{P(B)} avg 0.8302

| CP(A) - CP(B) | = 0.0099

C_{P(Avg)} = 0.8351

Approved by :

*** δ must be ≤ 0.01 for the test to be acceptable ***
 *** | Cp(A) - Cp(B) | must also be < 0.01 if average of Cp(A) and Cp(B) is to be used ***



CONTROL UNIT CALIBRATION

(Metric units, mm)

Date 9 Jan 25

Barometric press, Pb

Initial	Final	Average
758	758	758

 mmHg

Dry Gas Meter Data

Console No. M50-09

Metering System ID

DGM Number 333249

DGM Model ES-110

Calibrated by : Montri P.

Reference Dry Gas Meter Data

Serial No. 358794

Model S110

Correction factor (Yr) 1.0077

Last Calibration Date 25 Oct 24

Orifice manometer setting, ΔH mm H2O	Ref. DGM Volume V _r Liters	DGM Volume V _m Liters	Temperature (°C)				Time ⊙ min	DGM Correction factor (Y)	ΔH@ mm
			Ref DGM T _r	Dry Gas Meter					
				Inlet T _i	Outlet T _o	Avg T _m			
12.5	100.1	101.3	25	25	24	24.5	8.57	0.9926	41.6238
25.0	100.2	100.4	25	25	24	24.5	6.23	1.0012	44.0131
50.0	100.1	100.5	25	25	24	24.5	4.42	0.9965	44.2732
76.0	100.2	99.7	25	25	24	24.5	3.58	1.0037	44.1905
100.0	100.3	99.6	25	25	24	24.5	3.58	1.0034	45.3098
150.0	100.3	99.2	25	25	24	24.5	2.60	1.0029	45.7895

Average 1.0000 44.2000

Approved by :



PITOT TUBE CALIBRATION REPORT

Calibration Location: SECOT

Calibration Duct No.: CD-0123

Calibration Standard Pitot tube data

Pitot No. : Std-02

Type S Pitot No. : PS20-02

Calibration Date : 03-01-2025

Coefficient (Cp) : 0.99

Calibrated by : Mr. Montri P.

A Side Calibration

Run No.	ΔPstd (mm H ₂ O)	ΔPs (mm H ₂ O)	Cp(s)	Deviation, δ Cp(s) - Cp(A)
1	15.0	20.5	0.8468	0.0000
2	15.0	20.5	0.8468	0.0000
3	15.0	20.5	0.8468	0.0000

C_{P(A)}, avg 0.8468

B Side Calibration

Run No.	ΔPstd (mm H ₂ O)	ΔPs (mm H ₂ O)	Cp(s)	Deviation, δ Cp(s) - Cp(B)
1	15.0	21.0	0.8367	-0.0034
2	15.0	21.0	0.8367	-0.0034
3	15.0	20.5	0.8468	0.0068

C_{P(B)}, avg 0.8401

| CP(A) - CP(B) | = 0.0068

C_{P(Avg)} = 0.8435

Approved by :

*** δ must be ≤ 0.01 for the test to be acceptable ***
 *** | CP(A) - CP(B) | must also be < 0.01 if average of Cp(A) and Cp(B) is not be used ***

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Part Number: E04NI99E15AC084 Reference Number: 82-401409170-1
Cylinder Number: EB0102326 Cylinder Volume: 144.4 CF
Laboratory: 124 - Riverton (SAP) - NJ Cylinder Pressure: 2015 PSIG
PGVP Number: B52019 Valve Outlet: 660
Gas Code: CO,NO,NOX,SO2,BALN Certification Date: Feb 05, 2019

Expiration Date: Feb 05, 2027

Certification performed in accordance with 'EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)' document EPA 600/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS					
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
NOX	50.00 PPM	51.01 PPM	G1	+/- 0.9% NIST Traceable	01/28/2019, 02/05/2019
NITRIC OXIDE	50.00 PPM	50.86 PPM	G1	+/- 0.9% NIST Traceable	01/28/2019, 02/05/2019
SULFUR DIOXIDE	50.00 PPM	50.87 PPM	G1	+/- 1.0% NIST Traceable	01/28/2019, 02/05/2019
CARBON MONOXIDE	0.5000 %	0.5050 %	G1	+/- 0.7% NIST Traceable	01/31/2019
NITROGEN	Balance				

CALIBRATION STANDARDS					
Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	13060206	CC401947	4950 PPM CARBON MONOXIDE/NITROGEN	+/- 0.4%	Feb 15, 2019
PRM	12367	APEX1099237	9.82 PPM NITROGEN DIOXIDE/AIR	+/- 2.0%	Jun 02, 2017
NTRM	12010724	KAL004497	50.03 PPM NITRIC OXIDE/NITROGEN	+/- 0.8%	Mar 12, 2024
GMIS	1114201601	CC506710	4.971 PPM NITROGEN DIOXIDE/NITROGEN	+/- 2.0%	Nov 14, 2019
NTRM	14010327	KAL004376	49.08 PPM SULFUR DIOXIDE/NITROGEN	+/- 1.0%	Apr 17, 2024

The SRM, PRM or RGM noted above is only in reference to the GMIS used in the assay and not part of the analysis.

ANALYTICAL EQUIPMENT		
Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Siemens Ultramat 6 J3-599 COHIGH	NDIR	Jan 18, 2019
Nicolet 6700 APW1100391 NO	FTIR	Jan 10, 2019
Nicolet 6700 APW1100391 NO2	FTIR	Jan 10, 2019
Nicolet 6700 APW1100391 SO2	FTIR	Jan 10, 2019

Triad Data Available Upon Request

PERMANENT NOTES: PRODUCED IN ACCORDANCE WITH ISO17025 REQUIREMENTS

NOTES:

Gross Weight: 27806.3 grams

Net Weight: 4733.2 grams

This calibration std. has been certified in accordance with the May 2012 EPA Traceability Protocol, Document EPA-600/R-12/531. All testing processes and measurements conform to the requirements of ISO/IEC 17025 and to Airgas ISO 9001:2008 and relate only to items identified on this certificate. This document shall not be reproduced in full without written approval of the issuer.



TESTING CERT No. 3082.05

[Signature]
Approved for Release

Page 1 of 82-401409170-1



SOUND LEVEL METER CALIBRATION

Calibration Location: SECOT

Calibration Date: Mar 3, 25

ACOUSTIC CALIBRATOR

Brand	Model	Serial No.	Frequency (Hz)	Ref. Calibrated (dB)	Eff. Calibrated (dB)
Cirrus	CR:515	97097	1000.00	94.0	93.7

No.	Brand	Model	Serial No.	Reading (dB)	dB Adjust
6	Cirrus	CR161B	G301250	94.6	-0.9
9	Cirrus	CR161B	G301331	93.8	-0.1
10	Cirrus	CR161B	G301333	93.5	0.2
11	Cirrus	CR161B	G301339	93.7	0.0
32	Cirrus	CR161B	G302356	93.3	0.4

Calibrated by :

[Signature]

Approved by :

[Signature]



SOUND LEVEL METER CALIBRATION

Calibration Location: SECOT

Calibration Date: Apr 2, 25

ACOUSTIC CALIBRATOR

Brand	Model	Serial No.	Frequency (Hz)	Ref.Calibrated (dB)	Eff.Calibrated (dB)
Cirrus	CR:515	97097	1000.00	94.0	93.8

No.	Brand	Model	Serial No.	Reading (dB)	dB Adjust
1	SCARLET	ST-21D	820722	93.8	0.0
2	SCARLET	ST-21D	820723	93.8	0.0
4	SCARLET	ST-21D	820725	93.8	0.0
5	SCARLET	ST-21D	820726	93.8	0.0

Calibrated by :

Approved by :



มูลนิธิพัฒนาอุตสาหกรรม
ELECTRICAL AND ELECTRONICS INSTITUTE

ELECTRICAL AND ELECTRONICS INSTITUTE
FOUNDATION FOR INDUSTRIAL DEVELOPMENT

975 Moo 4, Bangpoo Industrial Estate, Soi 8, Sukhumvit Road km 37,

Phraek Sa, Mueang Samut Prakan, Samut Prakan 10280

Tel: +66 2709 4860 Fax: +66 2324 0917



NSC-TISI-TIS 17025
CALIBRATION 0119

Certificate No.: CP20240363EA

Operation No.: CP2024090339

Certificate of Calibration

Equipment: Sound Calibrator

Manufacturer: Cirrus Research Plc

Model/Type: CR:515

Serial No.: 97097

ID No.: -

Customer: SECOT Co.,Ltd.

Address: 239 Rimklongprapa Rd., Bangsue,
Bangkok 10800 Thailand

Received Date: 30 September 2024

Calibrated Date: 2 October 2024

Issued Date: 4 October 2024

Calibrated by: Ms. Juntaporn Kunhakom

Approved by:

(Mr. Sittichai Swaksuriyawong)
Group Manager

This report was prepared electronically using applicable electronic signature. Printing or copy of file are considered as a copy of the document.

The reported uncertainty of measurement was based on standard uncertainty multiplied by a coverage factor (k) providing a level of confidence of approximately 95%. This certificate may not be reproduced other than in full except with the prior written approval of the Electrical and Electronics Institute, Foundation for Industrial Development.

Certificate No.: CP20240363EA

Calibration Report

Equipment: Sound Calibrator
Manufacturer: Cirrus Research Plc
Model/Type: CR:515
Serial No.: 97097
ID No.: -
Ambient Temperature: (23 ± 2) °C
Relative Humidity: (50 ± 15) %
Pressure: (101.3 ± 1.5) kPa

Method of Calibration :-

IEC 60942:2017

Condition of this result of calibration

1. Reference standards instrument :-

Instrument	Model	Serial No.	Cert. No.	Due Date
1) Standard microphone	4180	2661000	AA-1007-24	6 June 2025
2) Waveform Generator	33511B	MY52302264	CK20240047EA	23 June 2025
3) Audio Analyzing DMM	2015-P	000136E	E1U2303776	7 December 2024
4) Pressure humidity and Temperature Transmitter	PTU301	F0640002	CL1-P240022 CD20240180EA	20 March 2025 7 August 2025

2. This result of calibration was found accurate as shown on date and place of calibration only.

3. This certification is traceable to the international system of unit maintained at :-

Reference standards instrument for Acoustic function

- National Institute of Metrology (Thailand)

Reference standards instrument for Electrical function

- Electrical and Electronics Institute; NSC Accredited Calibration No.0119

- NA Caltechnologies Co., Ltd.; ANAB Accredited Calibration No.AC-2658.

Result of Calibration:-

1. Function : Sound pressure level

Normal	Specified Sound	Measured value	Deviated value ^[1]	Acceptance limit ^[3]
Frequency (Hz)	Pressure level (dB)	(dB)	(dB)	(dB)
1000	94	94.09	0.09	±0.25

2. Function : Frequency

Normal Sound	Specified Frequency	Measured value	Deviated value ^[2]	Acceptance limit ^[3]
Pressure level (dB)	(Hz)	(Hz)	(%)	(%)
94	1000	1000.31	0.03	±0.70

Certificate No.: CP20240363EA

Calibration Report

3. Function : Total distortion + noise

Normal	Normal	Measured value ^[4]	Acceptance limit ^[5]
Sound Pressure level (dB)	Frequency (Hz)	(%)	(%)
94	1000	0.60	2.50

Uncertainty of measurement

Function	Uncertainty	Maximum-permitted uncertainty of measurement
Sound pressure level	0.10 dB	0.15 dB
Frequency	0.10 %	0.20 %
Total distortion + noise	0.40 %	0.50 %

- Note:
- [1] The deviated value is the absolute value of the difference between the measured value and the corresponding specified sound pressure level.
 - [2] The deviated value is the absolute value of the difference in percent between the measured value and the corresponding specified frequency.
 - [3] The acceptance limit is for the deviated value.
 - [4] The measured value is the total distortion + noise, measured over the frequency range from 20 Hz to 20 kHz.
 - [5] The acceptance limit is for the Measured value.
- Remarks:
- 1. Acceptance limit was IEC 60942:2017 Class 1.
 - 2. Maximum-permitted uncertainty of measurement was IEC 60942:2017 Class 1.
 - 3. The coverage factor $k = 2.00$

-- End of Report --



TECHNOLOGY PROMOTION ASSOCIATION (THAILAND-JAPAN)
CORPORATE SERVICES 3: EQUIPMENT CALIBRATION AND TESTING SERVICES
534/4 PATTANAKARN ROAD SOI 18, SUANLUANG, SUANLUANG BANGKOK 10250
TEL.0-2717-3000-29 FAX.0-2719-9484



Certificate of Calibration

Cert.No.: 24CH1275
Page.: 1 of 3

Equipment : pH Meter
Manufacturer : Mettler Toledo
Model : Seven2Go
Serial No. : C033160713
ID No. : ID.20
Condition As-Received: Used Item
Received Date : 08 October 2024
Calibration Date : 09 October 2024
Reference : 2410-0258DN-3
Submitted by : Secot Co.,Ltd.
239 Rimklongprapa Road,
Bangsue, Bangkok 10800

Ambient Temperature : (25 ± 2.5) °C
Relative Humidity : (50 ± 15) %
Calibration Procedure : In - house method :
- CP-CH5 by direct measurement with DC voltage
standard and direct measurement with
certified reference material (CRM)
- CP-CH8 by comparison with temperature standard

Calibrated by : Warakorn Lerngagtrakul
Saithip
Approved by :

() Unnopphol Harachai
() Ponpan Paipim
(✓) Saithip Meangmai
Issue Date : 10 October 2024

The Uncertainties are for a confidence probability of approximately 95%

This certificate may not be reproduced other than in full, except with the prior written
Approval of the head of Corporate Services 3 : Equipment Calibration and Testing Services.



Cert.No.: 24CH1275
Page.: 2 of 3

Condition of this calibration result

1. Reference Standard Instrument

Instrument	Serial No.	ID No.	Cert. No.	Due Date
1)Document Process Calibrator	54030049	130RC116	24E2759	25 Aug 2025
2)Ref. Standard Thermometer	4982054	110RC044	24I757	14 July 2025

- This Certification is traceable to SI Through Technology Promotion Association (Thailand - Japan)

2. Certified Reference Materials :The measurement results are traceable to SI through Hach Lenge GmbH Ltd.,
Deutsche Akkreditierungsstelle, Accredited No.D-RM-15184-01-00
:The measurement results are traceable to SI through CPA chem Ltd.,
ANSI-ASQ National Accreditation Board, Accredited No. AR-1835

Buffer Solution	Manufacturer	Lot No.	Exp. date
pH 4.008	CPA chem	1034203	27 Sep 2026
pH 6.999	Hach Lenge GmbH	C03145	28 Feb 2026
pH 9.997	CPA chem	970853	25 Apr 2025

3. This certificate is valid only to the item calibrated on date and place of calibration.

Calibration Results

Function : mV Measurement

Performing standard curve by Document Process Calibrator at pH (4,7,10)

Unit Under Calibration	Nominal Value	Standard Voltage Input	Actual Reading		Uncertainty of Measurement (±mV)	Coverage factor k
	pH	mV	mV	pH		
pH Meter	4.00	177.48	178	4.00	0.58	2.00
S/N.: C033160713	7.00	0.00	0	7.00	0.58	2.00
	10.00	-177.48	-177	10.00	0.58	2.00



Cert.No.: 24CH1275

Page.: 3 of 3

Calibration Results

Function : pH Measurement

Performing three buffers standard curve by using buffer nominal pH (4,7,10)

Unit Under Calibration	Standard pH Buffer Solution	Actual pH Reading	Actual mV Reading (mV)	Uncertainty of pH Measurement (\pm)	Coverage factor k
pH Electrode S/N.: 3234329	4.008	4.01	163	0.0079	2.00
	6.999	7.00	-12	0.0085	2.00
	9.997	10.00	-183	0.0095	2.00

Function : Temperature Measurement

(*) Without adjustment

This equipment was connected with Temperature Probe;

- Model : InLab®Expert Go-ISM

- Serial No. : 3234329

Dimension of probe

- Length : 120 mm.

- Diameter : 12 mm.

- Immersion Depth : 100 mm.

Calibration Point (°C)	Standard Temperature (°C)	UUC* Reading (°C)	Error (°C)	Uncertainty of measurement (\pm °C)	Coverage factor k
25.0	25.003	25.1	0.097	0.13	2.00
30.0	30.002	30.1	0.098	0.13	2.00
35.0	35.002	35.2	0.198	0.13	2.00

Remark - UUC* = Unit Under Calibration

The reported uncertainty of measurement was based on a standard uncertainty multiplied by a coverage factor k , providing a level of confidence of approximately 95 %.

-o0o-



สถาบันพัฒนาผู้ประกอบการ
ศูนย์บริการห้องปฏิบัติการอุตสาหกรรมอาหาร
Foundation for Industrial Development National Food Institute
Food Industrial Laboratory Service Center



Calibration Certificate

Certificate No.: 2403705-002-01
Client name: SECOT CO., LTD.
Address: 239 Rimklongprapa Road,
Bangsue, Bangsue, Bangkok 10800

Page 1 of 3

Equipment: Water Bath
Manufacturer: MEMMERT
Model: WB 29
Serial No.: I698.0051
ID No.: N/A
Order No.: 2403705
Operation No.: 2403705-002
Date of Receipt: 18 July 2024
Date of Calibration: 18 July 2024

Calibrated by Mr.Taveesak Seilee
Scientist

Approved by (Mr.Pheraphat Tuanjit)
Manager, Division of Calibration Laboratory
Responsible for the Technical Management Team

Date of Issue: 24 July 2024

The uncertainties are for a confidence probability of approximately 95 %.

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the units of measurement realized at the corresponding national standards laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the National Food Institute.

F-CS-009 Revision: 01 Date: 20-04-65



Calibration Report

Certificate No.: 2403705-002-01
Equipment: Water Bath
Model: WB 29 Serial No.: I698.0051
Resolution: 0.1 °C ID No.: N/A
Manufacturer: MEMMERT
Date of Calibration: 18 July 2024

Page 2 of 3

Location: Laboratory, SECOT CO., LTD.
Environment Condition: Ambient Temperature (30 ± 1) °C
Relative Humidity (58 ± 1) %
Line Voltage (221 ± 1) Volt

Condition of this results of Calibration:

- This instrument was calibrated by insert 5 standard thermometer into its liquid bath and calibration according to W-TE-011 based on ASTM E715-80 (2022): Standard Specification for Gravity-Convection and Forced-Circulation Water Baths.
 - The temperature scale used is ITS - 90.
 - All data show below were final values and the initial data may be obtained upon request.

Reference Standard Instrument :

Instrument	Model	Serial No./ID No.	Certificate No.	Due Date	Through
Digital Thermometer with sensor	34972A	MY49018263	TE 670368-01	23-Mar-25	NATIONAL FOOD INSTITUTE
	RTD	RTD#201-205 / CH#201-205			

- This certificate is traceable to International System of Units (SI Units).
- This certificate was certified only for the instrument we calibrated.
- This result of calibration was found accurate as shown on date and place of calibration only.
- Condition of Calibrated item : Good

UUC Description:

Time of Record 1 Hour 9 Minute At 95.0 °C

7. Result of Calibration :
- | | |
|-------------------------------------|--------------------|
| <input checked="" type="checkbox"/> | Without adjustment |
| <input type="checkbox"/> | After adjustment |

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Calibration Report

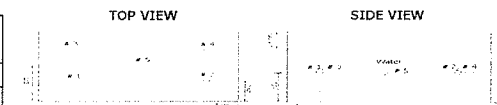
Certificate No.: 2403705-002-01
Equipment: Water Bath
Model: WB 29 Serial No.: I698.0051
Resolution: 0.1 °C ID No.: N/A
Manufacturer: MEMMERT
Date of Calibration: 18 July 2024

Page 3 of 3

Calibration point: 95.0 °C

Calibration result:

Calibration Condition	Temperature (°C)	Relative Humidity (%)	Line Voltage (Volt)
Min	29.9	57	220.3
Max	31.3	59	222.1



Sensor Installation Location

Table 1 : Reporting of Temperature

Calibration Point (°C)	Measured Temperature (°C) @ Sensor No. (Sensor No.5 is REF)					Uncertainty ± (°C)
	# 1	# 2	# 3	# 4	# 5	
95.0	94.93	95.13	94.92	95.09	95.03	0.29

Table 2 : Reporting of Characterization Result

UUC* Setting (°C)	UUC* Reading (°C)			Stability ± (°C)	Uniformity (°C)	Overall Variation (°C)
	MIN	MAX	Average			
95.0	94.9	95.1	95.0	0.19	0.11	0.67

Note The quoted uncertainty include " Stability " and " Loading effect (20% of Temp Uniformity)"
UUC* = Unit Under Calibration
Stability = One-half of the greatest maximum difference of measured temperatures at any one sensors, for at least half an hour after reaching steady state.
Uniformity = The maximum difference of measured temperatures at any sensors and the measured temperature at the reference location which are observed at the same time.
Overall Variation = The difference of the maximum and minimum measured temperatures throughout observation time.
The report uncertainty of measurement was based on standard uncertainty multiplied by coverage factor k= 2, providing a level of confidence of approximately 95 %.

----- End -----

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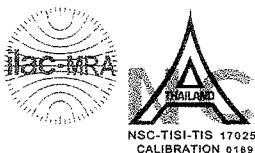


THAI CALIBRATION SERVICES CO., LTD.

19/8 Moo 9 Soi Raiking 30 Puttamonthon 5 Rd., Sampran, Nakornpatom 73210

Tel. 0-3439-7682-5 Fax: 0-3439-7687

www.thaical.com E-mail : sale@thaicalibration.com, lab@thaicalibration.com



CALIBRATION CERTIFICATE

Certificate No.S2504633S

page 1 of 2

Customer : SECOT CO., LTD.
239 RimKlongprapa Rd.,
Bangsue, Bangkok 10800

Equipment : Non-automatic weighing instrument (Electronic instrument)

Manufacturer : Mettler Toledo **Order No. :** 68S1723-1

Model : AG245 **Ambient temperature :** (25.3 ± 5.0) °C

Accuracy class : - **Relative humidity :** (39.9 ± 10.0) %

Capacity : 41 g / 210 g **Received date :** 23-Apr-2025

Resolution : 0.00001 g / 0.0001 g **Date of calibration :** 23-Apr-2025

Serial No. : 1117293916 **Date of issue :** 24-Apr-2025

ID No. : - **Condition of the balance :** Good working conditions

Place of calibration : LAB

Calibration method

This instrument was calibrated according to the EURAMET Calibration Guide No. 18.

Condition of reference standard weight

Instrument	Nominal value	Serial No.	Certificate No.	Due-date	Density (kg/m ³)
1 Standard weight set	1 mg to 2 kg	15885+15849	M2410001S	5-Oct-2025	7950

Traceability of the reference standard weight

This certificate is traceable to SI unit through Mass Calibration Laboratory Thai Calibration Services Co., Ltd., NSC-ONSC accredited no. Calibration 0189.

Calibrated By

Teerawat Intanom
Technician

Approved Signatory :

Somwang Wongduang

This calibration certificate may not be reproduced other than in full,
except with the prior written approval of the head of TCS calibration laboratory.



THAI CALIBRATION SERVICES CO., LTD.

19/8 Moo 9 Soi Raiking 30 Puttamonthon 5 Rd., Sampran, Nakornpatom 73210

Tel. 0-3439-7682-5 Fax: 0-3439-7687

www.thaical.com E-mail : sale@thaicalibration.com, lab@thaicalibration.com



CALIBRATION CERTIFICATE

Certificate No.S2504633S

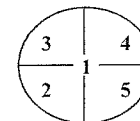
page 2 of 2

The repeatability of indication

Nominal Value (g)	Standard Deviation of reading (g)	Maximum difference between successive reading (g)	n
40	0.000008	0.00002	5
200	0.00000	0.0000	5

The effect of eccentric application of a load on the indication (test load : 100 g)

Position	Balance Reading (g)
Point 1	100.0000
Point 2	100.0000
Point 3	100.0000
Point 4	100.0000
Point 5	99.9997
Eccentric Value	0.0003



The error of indication

Nominal Value (g)	Value of Reference Standard Weight (g)	Balance Reading (g)	Correction (g)	Uncertainty (±) (g)	k
Unload	0.00000	0.00000	0.00000	0.000024	2.52
0.5	0.50000	0.49997	+0.00003	0.000028	2.13
1	1.00000	1.00000	0.00000	0.000030	2.08
10	9.99999	10.00000	-0.00001	0.000050	2.00
20	19.99999	19.99998	+0.00001	0.000068	2.00
40	39.99994	39.99999	-0.00005	0.00014	2.00
60	60.0000	60.0000	0.0000	0.00017	2.00
80	79.9999	80.0000	-0.0001	0.00023	2.00
100	100.0000	100.0000	0.0000	0.00022	2.00
120	120.0000	120.0000	0.0000	0.00028	2.00
140	140.0000	139.9999	+0.0001	0.00034	2.00
160	160.0000	160.0000	0.0000	0.00036	2.00
180	180.0000	179.9999	+0.0001	0.00043	2.00
200	200.0002	200.0000	-0.0002	0.00041	2.00

Remark : Adjustment, External weight nominal value 200 g, Standard weight of Lab

Uncertainty of measurement

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor (k), which for a normal distribution corresponds to a coverage probability of approximately 95% (confidence level).

This report will certify of the calibrated equipment only.

--End--



Request Service No.128/68

Page 1 of 3

Calibration Certificate

Nomenclature : Brand : Sartorius Type : Top-Loading Electronic Balance

Model : BSA224S-CW Serial No. : 32191636

Submitted by : Laboratory of SECOT CO., LTD.

Location of Calibration : BAL Room , 6th Floor, Secot Co., Ltd.

Calibration range : 0 – 200 g Scale division : 0.0001 g (220 g)

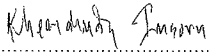
Calibration date : May 22,2025

Reference Standard M2402083S,M2502078S,M2403062N,M2502079S


Traceable to : Thai Calibration Services CO., LTD.

Ambient Condition : Temperature 24.42-25.02 °C

Humidity 49.2-51.2 % RH

Calibrated By : 

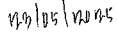
(Miss Khemchuda Insorn)

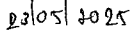
Approved By : 

(Miss Narisa Poowasanpetth)

Testing Officer

Chief of Technical Management

Date : 

Date : 

Issued Date : May 23,2025

Measurement Report

Request Service No.128/68

Page 2 of 3

Description : Brand : Sartorius

Type : Top-Loading Electronic Balance

Model : BSA224S-CW

Serial No. : 32191636

Calibration range : 0 – 200 g

Scale division : 0.0001 g (220 g)

Calibration date : May 22,2025

Ambient Condition : Temperature 24.42-25.02 °C Relative humidity 49.2-51.2 % RH

Measurement data :

1. Repeatability of Reading :

Load (g)	Standard Deviation of Reading (g)	Maximum Difference between Successive Reading (g)
50	0.00007	0.0002
100	0.00005	0.0002
150	0.00005	0.0001
200	0.00005	0.0001

2. Off-Center Loading :

A Mass of 50.0000 g was placed and moved to various position on the pan.

Unit : g

Center	Front	Left	Back	Right	Center	Maximum Difference
49.99990	49.99986	49.99990	49.99984	49.99984	49.99990	0.00006

Issued Date : May 23,2025

Request Service No. 128/68

Page 3 of 3

3. Departure from Nominal Value :

Reading (g)	Correction (g)	Uncertainty (+/- g)
0	0.00000	± 0.00007
1	+ 0.00003	± 0.00007
5	+ 0.00010	± 0.00010
10	+ 0.00004	± 0.00008
20	+ 0.00009	± 0.00010
40	+ 0.00002	± 0.00010
60	+ 0.00010	± 0.00011
80	+ 0.00013	± 0.00014
100	+ 0.00018	± 0.00016
120	+ 0.00019	± 0.00018
140	+ 0.00018	± 0.00020
160	+ 0.00017	± 0.00022
180	+ 0.00015	± 0.00024
200	+ 0.00019	± 0.00027

Calibrated by :

(Miss Khemchuda Insorn)

Testing Officer

Date :

Approved By :

(Miss Narisa Poowasanpetch)

Chief of Technical Management

Date :

Issued Date : May 23,2025

CERTIFICATE OF CALIBRATION


ISSUED BY **Noisemeters**

DATE OF ISSUE **26 February 2025** CERTIFICATE NUMBER **234084**

NoiseMeters
Acoustic House
Bridlington Road
Hunmanby
YO14 0PH
United Kingdom
www.noisemeters.com

Page 1 of 2

Approved signatory
N.Smith
Electronically signed:



doseBadge Reader : IEC 60942:2003

Instrument information

Manufacturer: Cirrus Research plc

Notes:

Model: RC:110A

Serial number: 95167

Class: 2

Test summary

Date of calibration: 21 February 2025

The doseBadge reader detailed above has been calibrated to the published data as described in the operating manual and in the half-inch configuration. The procedures and techniques used are as described in IEC60942_2003 Annex B – Periodic Tests and three determinations of the sound pressure level, frequency and total distortion were made.

The sound pressure level was measured using a WS2F condenser microphone type MK:224 manufactured by Cirrus Research plc.

The results have been corrected to the reference pressure of 101.33 kPa using the manufacturer's data.

The doseBadge Reader has been shown to conform to the Class 2 requirements for periodic testing, described in Annex B of IEC 60942:2003 for the sound pressure level(s) and frequency(ies) stated, for the environmental conditions under which the tests were performed.

However, as public evidence was not available, from a testing organisation responsible for pattern approval, to demonstrate that the model of doseBadge Reader conformed to the requirements for pattern evaluation described in Annex A of IEC 60942:2003, no general statement or conclusion can be made about conformance of the doseBadge Reader to the requirements of IEC 60942:2003.

Notes:

This certificate provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory. The results within this certificate relate only to the items calibrated. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a coverage probability of approximately 95%.

CERTIFICATE OF CALIBRATION

Certificate Number:

234084

Page 2 of 2

Environmental conditions

The following conditions were recorded at the time of the test:

Before Pressure: 99.38 kPa Temperature: 25.0 °C Humidity: 40.4 %
After Pressure: 99.39 kPa Temperature: 25.1 °C Humidity: 37.9 %

Test equipment

Equipment	Manufacturer	Model	Serial number
Distortion Meter	Keithley	2015	1063074
Environmental Monitor	Comet	T7510	21962628

Initial Acoustic Results

	Expected	Sample 1	Sample 2	Sample 3	Average	Deviation	Tolerance	Uncertainty
Level (dB)	114.00	113.79	113.78	113.79	113.79	-0.21	±0.75	0.11 dB
Distortion (%)	< 4.00	1.52	0.51	0.51	0.84	0.84	+4.00	0.13 %
Frequency (Hz)	1000.0	990.4	990.4	990.3	990.4	-9.6	±20.0	0.1 Hz

The measured quantities or deviations (as applicable), extended by the expanded combined uncertainty of measurement, must not exceed the corresponding tolerance.

Adjusted Acoustic Results

	Expected	Sample 1	Sample 2	Sample 3	Average	Deviation	Tolerance	Uncertainty
Level (dB)	114.00	113.97	113.97	113.97	113.97	-0.03	±0.75	0.11 dB
Distortion (%)	< 4.00	0.51	0.50	0.51	0.51	0.51	+4.00	0.13 %
Frequency (Hz)	1000.0	990.3	990.3	990.3	990.3	-9.7	±20.0	0.1 Hz

Functionality Results

Function	Result
Keypad	Pass
Battery Power	Pass
Display	Pass
Communication	Pass
2 way IR link	Pass
Clock	Pass

End of results

Calibration Certificate

BEIJING JI TECHNOLOGY CO., LTD.
www.jitec.com
www.janttech.com

Instrument information

Name	WET BULB GLOBE TEMPERATURE (WBGT)METER
Series No	3522210177
Type	JT2011-E2A
Customer	SECOT CO., LTD.
Address	239 Rim Klong Prapa Road, Bang Sue, Bang Sue, Bangkok 10800

Integrity check of instrument

Appearance	✓
Parts integrity	✓
Screen display or touch	✓
Instrument button	✓
Power supply	✓
battery	✓
Data storage and export	✓
Deviation degree of comparison testwith	✓
standard instrument	✓

Calibration Results

UUC Sensor	Standard Temperature (°C)	UUCReading (°C)	Correction (°C)	Uncertainty (±°C)
WET	25.0	25.1	-0.1	0.2
	30.0	30.2	-0.2	0.2
	35.0	34.9	0.1	0.2
	40.0	39.8	0.2	0.2
	45.0	44.9	0.1	0.2
DRY	25.0	25.1	-0.1	0.2
	30.0	30.2	-0.2	0.2
	35.0	34.9	0.1	0.2
	40.0	39.8	0.2	0.2
	45.0	44.8	0.2	0.2
GLOBE	25.0	25.1	-0.1	0.2
	30.0	30.2	-0.2	0.2
	35.0	34.9	0.1	0.2
	40.0	40.2	-0.2	0.2
	45.0	45.1	-0.1	0.2

Environmental conditions: temperature: 26 °C±2°C, relative humidity: 30% RH±10RH%

Reference Standard : Standard Mercury Thermometers, Manufacturer: BGRI, Model: STA, SN : 2-56,
Calibrated Date : 20 February 2023, Calibration Certificate No. : RA21H-AB1000009

This Certificate is traceable to NCMT North China, Certificate No.: RA20J-AK000073

Calibration Engineer :

Date : January 15, 2025

JANTYTECH
建通科技

Instrument information

JANTYTECH
建通科技

Name	WET BULB GLOBE TEMPERATURE (WBGT)METER
Series No	3522210178
Type	JT2011-E2A
Customer	SECOT CO., LTD.
Address	239 Rim Klong Prapa Road, Bang Sue, Bang Sue, Bangkok 10800

Integrity check of instrument

Appearance	✓
Parts integrity	✓
Screen display or touch	✓
Instrument button	✓
Power supply	✓
battery	✓
Data storage and export	✓
Deviation degree of comparison test with standard instrument	✓

Calibration Results

UUC Sensor	Standard Temperature (°C)	UUC Reading (°C)	Correction (°C)	Uncertainty (± °C)
WET	25.0	25.1	-0.1	0.2
	30.0	29.9	0.1	0.2
	35.0	34.9	0.1	0.2
	40.0	40.1	-0.1	0.2
	45.0	45.1	-0.1	0.2
DRY	25.0	25.1	-0.1	0.2
	30.0	30.2	-0.2	0.2
	35.0	35.1	-0.1	0.2
	40.0	39.8	0.2	0.2
	45.0	44.8	0.2	0.2
GLOBE	25.0	25.1	-0.1	0.2
	30.0	29.8	0.2	0.2
	35.0	35.1	-0.1	0.2
	40.0	39.9	0.1	0.2
	45.0	44.8	0.2	0.2

Environmental conditions: temperature: 26 °C±2°C, relative humidity: 30% RH±10RH%

Reference Standard : Standard Mercury Thermometers, Manufacturer: BGRI, Model: STA, SN : 2-56,
Calibrated Date : 20 February 2023, Calibration Certificate No. : RA21H-AB1000009

This Certificate is traceable to NCMT North China, Certificate No.: RA20J-AK0000073

Calibration Engineer : 

Date : January 15, 2025

质检专用章

Instrument information

JANTYTECH
建通科技

Name	WET BULB GLOBE TEMPERATURE (WBGT)METER
Series No	3522210179
Type	JT2011-E2A
Customer	SECOT CO., LTD.
Address	239 Rim Klong Prapa Road, Bang Sue, Bang Sue, Bangkok 10800

Integrity check of instrument

Appearance	✓
Parts integrity	✓
Screen display or touch	✓
Instrument button	✓
Power supply	✓
battery	✓
Data storage and export	✓
Deviation degree of comparison test with standard instrument	✓

Calibration Results

UUC Sensor	Standard Temperature (°C)	UUC Reading (°C)	Correction (°C)	Uncertainty (± °C)
WET	25.0	24.8	0.2	0.2
	30.0	30.1	-0.1	0.2
	35.0	34.8	0.2	0.2
	40.0	40.1	-0.1	0.2
	45.0	45.1	-0.1	0.2
DRY	25.0	25.1	-0.1	0.2
	30.0	29.9	0.1	0.2
	35.0	35.1	-0.1	0.2
	40.0	40.2	-0.2	0.2
	45.0	44.8	0.2	0.2
GLOBE	25.0	24.8	0.2	0.2
	30.0	29.8	0.2	0.2
	35.0	34.8	0.2	0.2
	40.0	40.1	-0.1	0.2
	45.0	45.2	-0.2	0.2

Environmental conditions: temperature: 26 °C±2°C, relative humidity: 30% RH±10RH%

Reference Standard : Standard Mercury Thermometers, Manufacturer: BGRI, Model: STA, SN : 2-56,
Calibrated Date : 20 February 2023, Calibration Certificate No. : RA21H-AB1000009

This Certificate is traceable to NCMT North China, Certificate No.: RA20J-AK0000073

Calibration Engineer : 

Date : January 15, 2025

质检专用章

Instrument information



Name **WET BULB GLOBE TEMPERATURE (WBGT)METER**

SeriesNo **3522210181**

Type **JT2011-E2A**

Customer **SECOT CO., LTD.**

Address **239 Rim Klong Prapa Road, Bang Sue, Bang Sue, Bangkok 10800**

Integrity check of instrument

Appearance	✓
Parts integrity	✓
Screen display or touch	✓
Instrument button	✓
Power supply	✓
battery	✓
Data storage and export	✓
Deviation degree of comparison test with standard instrument	✓

Calibration Results

UUC Sensor	Standard Temperature (°C)	UUC Reading (°C)	Correction (°C)	Uncertainty (±°C)
WET	25.0	24.9	0.1	0.2
	30.0	29.8	0.2	0.2
	35.0	34.9	0.1	0.2
	40.0	40.1	-0.1	0.2
	45.0	45.1	-0.1	0.2
DRY	25.0	25.1	-0.1	0.2
	30.0	30.2	-0.2	0.2
	35.0	35.2	-0.2	0.2
	40.0	40.2	-0.2	0.2
	45.0	44.9	0.1	0.2
GLOBE	25.0	24.9	0.1	0.2
	30.0	29.9	0.1	0.2
	35.0	34.9	0.1	0.2
	40.0	40.1	-0.1	0.2
	45.0	45.2	-0.2	0.2

Environmental conditions: temperature: 26 °C±2°C, relative humidity: 30% RH±10RH%

Reference Standard : Standard Mercury Thermometers, Manufacturer: BGRI, Model: STA, SN : 2-56,
Calibrated Date : 20 February 2023, Calibration Certificate No. : RA21H-AB1000009

This Certificate is traceable to NCMT North China, Certificate No.: RA20J-AK000075

Calibration Engineer :



Date :

January 15, 2025



INTERNATIONAL TESTING SERVICE CO., LTD

1213/388 Ladprao 94 Ladprao Rd. Wangtonglang Bangkok 10310
Tel 0-2559-2095 Fax 0-2559-2096

E-mail : sale@itest-lab.com web site : www.itest-lab.com



NSC-TISI-TIS 17025
CALIBRATION 129

CALIBRATION CERTIFICATE

Issued date: 30 January 2025

Client Name : **SECOT CO., LTD.**

Address : 239 Rimklongprapa Rd., Bangsue, Bangkok 10800 Thailand.

Request No: **C-2501 - 026**

Laboratory No.: **CAL - 026**

Date of Request: 27 January 2025.

Date of Calibration: 29 January 2025.

1. Unit Under Calibration (UUC) :

Nomenclature : Digital Light Meter

Serial No.: A 051050

Maker : EXTECH

Model : 407026

2. Place of Calibration: Photometry Standard Laboratory, INTERNATIONAL TESTING SERVICE CO., LTD.

3. Range of Calibration: 1 Range

4. Condition of Laboratory: Ambient temperature: (25 ± 2) °C and relative humidity (60 ± 20) %.

5. Reference Standard: Standard Tungsten Halogen Lamp, Serial No.: 504011, which was calibrated on
22 April 2024, can be traceable to International System of Unit (SI) through National Institute of
Metrology (Thailand), Certificate No.: TP-1014-24.

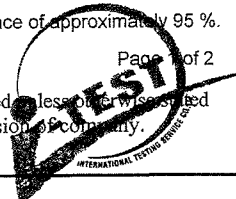
6. Support Equipment:

1. Photometric bench, 6.3 meter long.
2. DC. power supply, Serial No.: EJ 19A 009, Model: GPR-25H 300, Maker: GW INSTEK.
3. Digital Multimeter, Model: 34401A, S/N: MY44011212 and MY44011215.
4. Foot Candle / Lux Meter, Model: 407026, S/N: Q 558437, Maker: EXTECH.

7. Calibration Procedure:

The measurement was done in accordance with WI-CP-01. The reported uncertainty is based on a standard
uncertainty multiplied by a coverage factor k = 2, providing a level of confidence of approximately 95 %.

The Results shown in this certification report refer only to the equipment(s) calibrated, unless otherwise stated.
This Calibration Certificate cannot be reproduced, except in full, without permission of company.



Page 1 of 2

**INTERNATIONAL TESTING SERVICE CO., LTD**

1213/388 Ladprao 94 Ladprao Rd. Wangtonglang Bangkok 10310
Tel 0-2559-2095 Fax 0-2559-2096

E-mail : sale@itest-lab.com web site : www.itest-lab.com



Request No: **C-2501 - 026**

Serial No.: A 051050

Laboratory No.: **CAL - 026**

Results :

UUC Range	Standard (lx)	UUC Reading (lx)		Correction (lx)	Uncertainty of Measurement (+ lx)
		Before adjust	After adjust		
2000	0	0	0	0	0.60
	100	96	99	1	2.1 % of Reading
	500	480	501	-1	
	1000	960	1002	-2	
	1500	1448	1507	-7	
	1900	1836	1911	-11	

Note : 1. The results relate only to the items calibrated.
2. Zero adjust before used.

Calibration result approved by

(Mr. Yuktana Tholueng)



Approved on behalf of
International Testing Service Co., Ltd

(Mr. Pichit Vivat-Anant)

Managing Director