

ภาคผนวก ง

ใบรับรองผลการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม

ภาคผนวก ง.1

ใบรับรองผลการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม (ระยะก่อสร้าง)

ภาคผนวก ง.1-1

ผลการตรวจวัดคุณภาพอากาศในบรรยากาศ



บริษัท ซีคอต จำกัด

SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต แขวงบางเขน เขตบางเขน กรุงเทพฯ 10800

239 RIMKOLNGPRAPA 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 : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028AMBIENT(Nov)/TSP
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 18-25/11/2022
RECEIVED DATE : 02/12/2022 ANALYTICAL DATE : 03-06/12/2022
REPORT DATE : 07/12/2022 SAMPLE CONDITION : Good
SITE OPERATOR : Mr. Siwanon Kulawong
LOCATION DESCRIPTION : Project Area

PARAMETER	SAMPLING DATE	UNIT	RESULT	STANDARD*	REFERENCE METHOD
TSP (24 hr)	18-19/11/2022	mg/cu.m.	0.62	0.330	High Volume Air
	19-20/11/2022	mg/cu.m.	0.670		Sampler/Gravimetric
	20-21/11/2022	mg/cu.m.	0.674		Method
	21-22/11/2022	mg/cu.m.	0.073		
	22-23/11/2022	mg/cu.m.	0.081		
	23-24/11/2022	mg/cu.m.	0.046		
	24-25/11/2022	mg/cu.m.	0.031		

Phatchara Samanchan

(Miss Phatchara Samanchan)

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 the National Environment Board, No.24, B.E.2547 (2004).



บริษัท ซีคอต จำกัด

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028AMBIENT(Nov)/PM-10
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 18-25/11/2022
RECEIVED DATE : 02/12/2022 ANALYTICAL DATE : 03-06/12/2022
REPORT DATE : 07/12/2022 SAMPLE CONDITION : Good
SITE OPERATOR : Mr. Siwanon Kulawong
LOCATION DESCRIPTION : Project Area

PARAMETER	SAMPLING DATE	UNIT	RESULT	STANDARD*	REFERENCE METHOD
PM-10 (24 hr)	18-19/11/2022	mg/cu.m.	0.035	0.120	High Volume Air
	19-20/11/2022	mg/cu.m.	0.042		Sampler (Hi-Vol PM-10)
	20-21/11/2022	mg/cu.m.	0.046		Size Selective Inlet/
	21-22/11/2022	mg/cu.m.	0.046		Gravimetric Method
	22-23/11/2022	mg/cu.m.	0.054		
	23-24/11/2022	mg/cu.m.	0.023		
	24-25/11/2022	mg/cu.m.	0.017		

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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

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ภาคผนวก ง.1-2

ผลการตรวจวัดความเร็วและทิศทางลม

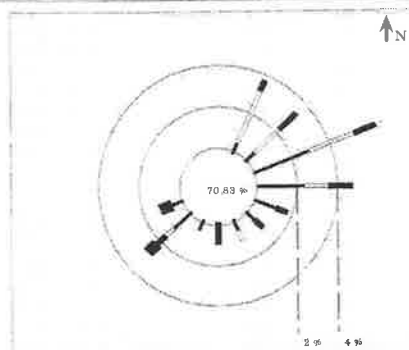


Meteorological Monitoring Results : Wind Rose MTR-BEE

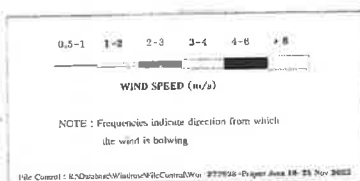
Location : Project Area
Wind Speed Model : NRG Symphonie
Wind Direction Model : NRG Symphonie

Monitor period : 18-25 Nov 2022
Serial No : A4901
Serial No : A4901

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	
N	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNE	0.0060	0.0298	0.0060	0.0000	0.0000	0.0000	0.0417
NE	0.0060	0.0179	0.0119	0.0000	0.0000	0.0000	0.0357
ENE	0.0298	0.0238	0.0119	0.0000	0.0000	0.0000	0.0655
E	0.0238	0.0119	0.0119	0.0000	0.0000	0.0000	0.0476
ESE	0.0119	0.0000	0.0060	0.0000	0.0000	0.0000	0.0179
SE	0.0060	0.0000	0.0060	0.0000	0.0000	0.0000	0.0119
SSE	0.0060	0.0060	0.0000	0.0000	0.0000	0.0000	0.0119
S	0.0000	0.0000	0.0119	0.0000	0.0000	0.0000	0.0060
SSW	0.0060	0.0000	0.0000	0.0000	0.0000	0.0000	0.0060
SW	0.0119	0.0060	0.0060	0.0000	0.0060	0.0000	0.0298
WSW	0.0060	0.0000	0.0000	0.0000	0.0060	0.0000	0.0119
W	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
WNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM							0.7083



Application : WindPro Ver.1.0
Control : 16 Direction Calculation With
Calm Wind < 0.5 m/s
Data Unit : Direction in Deg.
Wind Speed in m/s



(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



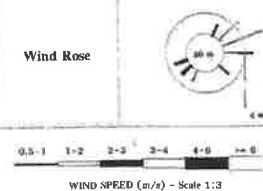
Meteorological Monitoring Results : Wind Rose MTR-BEE

Location : Project Area
Wind Speed Model : NRG Symphonie
Wind Direction Model : NRG Symphonie

Monitor period : 18-25 Nov 2022
Serial No : A4901
Serial No : A4901

Time	18-19 Nov 2022		19-20 Nov 2022		20-21 Nov 2022		21-22 Nov 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
13:00 - 14:00	5.2	SW	0.2	NNE	0.0	ESE	0.0	SW
14:00 - 16:00	4.4	WSW	0.3	SSE	0.0	ESE	0.2	SW
15:00 - 16:00	2.8	NNE	0.0	NNE	0.0	ESE	1.2	NNE
16:00 - 17:00	2.4	SE	0.0	S	0.0	SSE	0.0	NNE
17:00 - 18:00	2.7	E	0.0	SSE	0.9	ENE	0.0	NE
18:00 - 19:00	1.3	ENE	0.2	ENE	0.0	WSW	0.0	SSE
19:00 - 20:00	1.3	NE	0.0	SW	1.2	NNE	0.0	ESE
20:00 - 21:00	0.6	E	0.0	SSE	0.0	NE	0.0	F
21:00 - 22:00	0.0	SSW	0.9	ENE	0.0	NE	0.0	SSW
22:00 - 23:00	0.0	S	0.1	NE	0.0	SE	0.0	WSW
23:00 - 24:00	0.0	SSE	0.0	NNE	0.0	SE	0.0	WSW
00:00 - 01:00	0.7	ENE	0.1	NNE	0.0	ENE	0.0	ENE
01:00 - 02:00	0.0	E	0.6	E	0.0	SE	0.0	NNE
02:00 - 03:00	0.0	ESE	0.0	ESE	0.0	E	0.0	SSW
03:00 - 04:00	0.3	WSW	0.7	SSE	0.3	E	0.0	NE
04:00 - 05:00	0.6	SSW	0.0	WSW	0.0	N	0.0	SSE
05:00 - 06:00	0.0	WSW	0.0	E	0.0	E	0.0	WSW
06:00 - 07:00	0.0	ENE	0.0	SSE	0.0	NE	0.0	ESE
07:00 - 08:00	0.2	WSW	0.5	SW	0.6	SE	0.5	E
08:00 - 09:00	0.1	WSW	0.0	NNE	0.2	SE	0.4	N
09:00 - 10:00	1.5	ENE	0.0	SSE	0.4	SSW	0.4	NNE
10:00 - 11:00	0.5	NE	0.0	SE	0.0	WSW	0.9	ENE
11:00 - 12:00	0.2	N	0.0	E	0.0	SW	0.0	NNE
12:00 - 13:00	0.0	NNE	0.0	NE	2.1	ENE	0.5	WSW

Wind Rose



(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose

MTR-BEE

Location : Project Area

Monitor period : 18-25 Nov 2022

Wind Speed Model : NRG Symphonie

Serial No : A4901

Wind Direction Model : NRG Symphonie

Serial No : A4901

Time	22-23 Nov 2022		23-24 Nov 2022		24-25 Nov 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
13:00 - 14:00	0.0	NNE	0.2	NNF	1.8	NNE
14:00 - 15:00	0.0	ENE	0.3	SSE	1.7	NE
15:00 - 16:00	0.1	SW	0.0	NNE	0.3	SSW
16:00 - 17:00	0.6	E	0.0	S	1.0	E
17:00 - 18:00	0.0	S	0.0	SE	2.0	S
18:00 - 19:00	0.0	WSW	0.2	ENE	0.2	WSW
19:00 - 20:00	0.0	ESE	0.0	SW	2.0	E
20:00 - 21:00	0.0	SSE	0.0	SSE	1.0	SSE
21:00 - 22:00	0.0	NNE	0.9	ENE	1.0	NNE
22:00 - 23:00	0.0	S	0.1	NE	2.0	S
23:00 - 24:00	1.0	SW	0.0	WSW	0.0	ESE
00:00 - 01:00	0.0	SSW	0.2	ENE	0.0	ENE
01:00 - 02:00	0.0	SSW	0.1	N	0.0	SE
02:00 - 03:00	0.0	S	0.3	S	0.0	E
03:00 - 04:00	0.0	SE	1.0	NNF	0.3	E
04:00 - 05:00	0.8	NNE	0.2	SSE	0.0	N
05:00 - 06:00	0.3	SE	0.7	SW	0.0	ENE
06:00 - 07:00	0.4	NE	1.6	E	0.0	NE
07:00 - 08:00	0.6	ESE	1.4	FNE	0.6	ESE
08:00 - 09:00	2.1	ESE	0.1	N	0.2	SE
09:00 - 10:00	2.3	ENE	0.3	N	0.4	SSW
10:00 - 11:00	2.0	SW	1.0	NE	0.0	WSW
11:00 - 12:00	2.1	NE	0.1	NNE	0.0	SW
12:00 - 13:00	1.8	ENE	0.2	SW	2.1	NE

Wind Rose



0.5 1 2 3 4 5 6
WIND SPEED (m/s) - Scale 1:3

File Location : R:\Datahub\Windrose\FileCase\Win-222028-Project Area 14-25 Nov 2022


(Miss Katesarin Vorradetwittaya)
Environmental Scientist


(Mira Preeda Somjai)
Technical Management Team

ภาคผนวก ง.1-3

ผลการตรวจวัดระดับเสียงในบรรยากาศ



Noise Monitoring Result : Community Noise

MTR-BEE

Location : Construction Area

Monitor Period : 18-25 Nov 2022

SLM Model : RION NL-21

Serial No : 00187497

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : RION NC-74

Serial No : 34283648

Calibration Ref dB(A) : 94.0

Certified Date : 24 Dec 2021

SLM Reading / Adjust dB(A) : 93.8/0.2

Expire Date : 23 Dec 2022

Cal Sheet No.: NC-74-2022-095

Time	Equivalent Sound Pressure Level (dB(A))						
	18-19 Nov 2022	19-20 Nov 2022	20-21 Nov 2022	21-22 Nov 2022	22-23 Nov 2022	23-24 Nov 2022	24-25 Nov 2022
12:00 - 13:00	58.8	61.8	61.5	61.0	60.9	62.0	61.6
13:00 - 14:00	66.0	63.7	64.8	62.2	63.7	66.1	64.8
14:00 - 15:00	65.9	66.9	64.3	66.0	65.5	69.6	64.4
15:00 - 16:00	68.2	65.3	62.6	66.7	63.2	64.9	65.6
16:00 - 17:00	73.3	74.6	61.9	62.5	64.8	66.8	64.0
17:00 - 18:00	70.9	62.6	64.0	61.9	63.1	66.3	62.6
18:00 - 19:00	65.5	62.8	62.7	62.0	63.8	62.3	63.3
19:00 - 20:00	74.5	63.5	62.2	61.7	64.8	61.2	63.5
20:00 - 21:00	70.6	63.0	64.8	67.5	62.8	61.4	63.0
21:00 - 22:00	63.9	61.2	68.4	68.3	61.9	61.5	61.4
22:00 - 23:00	61.3	61.4	68.0	61.0	63.4	61.5	61.3
23:00 - 00:00	62.1	65.1	68.0	63.8	63.0	62.0	62.3
00:00 - 01:00	61.6	61.1	67.7	62.0	61.5	62.2	62.2
01:00 - 02:00	61.3	61.3	67.6	60.6	61.9	65.8	61.6
02:00 - 03:00	61.5	61.8	69.9	60.7	62.1	70.4	61.6
03:00 - 04:00	62.1	61.7	68.0	60.7	62.5	67.2	61.9
04:00 - 05:00	61.7	61.9	67.9	60.9	62.0	69.3	61.7
05:00 - 06:00	61.7	61.7	67.7	60.7	61.0	63.7	63.3
06:00 - 07:00	61.9	61.9	67.5	60.9	61.3	71.6	63.3
07:00 - 08:00	61.9	62.0	67.3	61.0	60.9	69.3	63.7
08:00 - 09:00	61.5	63.0	66.8	66.5	61.3	70.5	63.7
09:00 - 10:00	62.3	68.1	67.0	72.0	65.2	64.6	63.8
10:00 - 11:00	65.2	64.9	63.4	63.9	71.0	64.2	62.8
11:00 - 12:00	64.6	61.5	65.6	63.8	62.6	62.9	61.3
Leq(24)*	67.0	65.3	66.4	64.5	63.8	66.6	63.0
Ldn	70.0	69.5	74.2	68.7	69.0	73.7	68.8
Lmax**	98.0	92.5	88.0	91.0	89.9	85.1	89.0

Standard-24Hr

70 dB(A)

Standard-Max

115 dB(A)

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

** Maximum Sound Pressure Level between 12:00-12:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-BEE

Location : Construction Area

Monitor Period : 18-25 Nov 2022

SLM Model : RION NL-21

Serial No : 00187497

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : RION NC-74

Serial No : 34283648

Calibration Ref dB(A) : 94.0

Certified Date : 24 Dec 2021

SLM Reading / Adjust dB(A) : 93.8/0.2

Expire Date : 23 Dec 2022

Cal Sheet No.: NC-74-2022-095

Time	L90 (dB(A))						
	18-19 Nov 2022	19-20 Nov 2022	20-21 Nov 2022	21-22 Nov 2022	22-23 Nov 2022	23-24 Nov 2022	24-25 Nov 2022
12:00 - 13:00	57.4	60.3	60.0	59.8	59.8	60.7	60.7
13:00 - 14:00	58.7	60.8	61.3	60.7	60.7	61.9	61.4
14:00 - 15:00	60.2	62.2	61.4	61.2	61.7	63.4	62.2
15:00 - 16:00	61.2	61.7	61.0	61.2	60.9	61.8	61.9
16:00 - 17:00	61.6	62.4	60.2	60.6	61.1	61.4	61.6
17:00 - 18:00	60.7	61.0	61.8	59.6	60.1	61.6	61.1
18:00 - 19:00	60.8	61.4	60.8	59.3	60.1	60.1	62.1
19:00 - 20:00	62.0	62.2	60.9	60.5	61.6	60.3	62.0
20:00 - 21:00	61.4	61.5	63.8	60.7	61.1	60.4	61.1
21:00 - 22:00	59.7	59.8	67.7	60.0	60.2	60.5	60.4
22:00 - 23:00	59.8	60.1	67.4	59.8	59.8	60.4	60.2
23:00 - 00:00	60.4	59.7	67.3	59.6	59.8	60.6	61.2
00:00 - 01:00	59.4	59.8	66.8	59.7	59.9	60.6	61.2
01:00 - 02:00	59.6	60.0	66.9	59.5	60.0	61.6	60.8
02:00 - 03:00	59.6	60.5	68.0	59.7	60.3	66.8	60.8
03:00 - 04:00	60.0	60.4	67.3	59.5	60.4	65.1	61.0
04:00 - 05:00	59.9	60.6	67.2	59.6	60.1	63.3	60.9
05:00 - 06:00	60.1	60.4	66.9	59.5	59.6	62.6	61.0
06:00 - 07:00	60.1	60.6	66.8	59.8	59.8	67.7	62.0
07:00 - 08:00	60.5	60.7	66.6	59.8	59.7	64.2	62.6
08:00 - 09:00	59.8	60.4	66.1	59.9	59.7	66.4	62.6
09:00 - 10:00	60.4	60.1	62.2	62.2	60.6	63.4	62.5
10:00 - 11:00	61.1	61.6	61.4	62.2	62.6	62.6	61.1
11:00 - 12:00	60.3	59.2	59.8	60.4	61.0	60.8	60.0
L90(avg)*	60.3	60.8	65.1	60.3	60.5	63.1	61.4

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team

ภาคผนวก ง.2

ใบรับรองผลการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม (ระยะดำเนินการ)

ภาคผนวก ง.2-1

ผลการตรวจวัดคุณภาพอากาศจากปล่องระบาย



บริษัท ซีคอต จำกัด
SECOT CO.,LTD.

239 ถนนวิเศษทองประเสริฐ 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 : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sdk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 04/09/2022
RECEIVED DATE : 05/09/2022 ANALYTICAL DATE : 07/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase I OPERATOR : Mr. Kittipong Thakongsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas
STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 23.6 m/s
Diameter : 0.305 m Flow rate^{1/} : 65.7 Ncu.m/min
Temperature : 165.0 °C Excess Oxygen : 20.3 %
Moisture : 6.0 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.3%O ₂	g/s	Concentration	Emission Rate (g/s)	
Oxide of Nitrogen	ppm	< 1.00	1.45	0.0030	85 ^{1/}	0.06 ^{2/}	US EPA Method 7
	mg/m ³	< 2.00	2.73				

Phatchara Samanchan
(Miss Phatchara Samanchan)

Analyst

REG.NO. 2-239-9-8183

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

REG.NO. 2-239-9-6419

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

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

3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. ^{2/} Notification of the Ministry of Natural Resource and Environment, B.E.2557.

5. ^{3/} The assigned value in EIA report, B.E.2565.



บริษัท ซีคอต จำกัด
SECOT CO.,LTD.

239 ถนนวิเศษทองประเสริฐ 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 : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sdk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 04/09/2022
RECEIVED DATE : 05/09/2022 ANALYTICAL DATE : 19/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase I OPERATOR : Mr. Kittipong Thakongsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas
STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 23.6 m/s
Diameter : 0.305 m Flow rate^{1/} : 65.7 Ncu.m/min
Temperature : 165.0 °C Excess Oxygen : 20.3 %
Moisture : 6.0 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.3%O ₂	g/s	Concentration	Emission Rate (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.00002	2 ^{2/} , 1 ^{3/}	0.001 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. ^{2/} Notification of the Ministry of Natural Resource and Environment, B.E.2557.

5. ^{3/} The assigned value in EIA report, B.E.2565.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 05/09/2022
RECEIVED DATE : 06/09/2022 ANALYTICAL DATE : 07/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 1 OPERATOR : Mr. Kittipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas
STACK DESCRIPTION :

Height : 15.0 m Gas Velocity : 14.4 m/s
Diameter : 0.305 m Flow rate¹⁾ : 40.3 Ncu.m/min
Temperature : 164.0 °C Excess Oxygen : 19.7 %
Moisture : 5.8 %

PARAMETER	UNIT	ND	RESULT ¹⁾		STANDARD		REFERENCE
		(Non-detectable)	19.7%O ₂	g/s	Concentration	Emission Rate (g/s)	
Oxide of Nitrogen	ppm	< 1.00	1.32	0.0017	85 ²⁾	0.06 ³⁾	US EPA Method 7
	mg/m ³	< 2.00	2.48				

Phatchara Samanchan
(Miss Phatchara Samanchan)

Analyst

REG.NO. 2-239-9-8183

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

REG. NO. 2-239-n-6419

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 05/09/2022
RECEIVED DATE : 06/09/2022 ANALYTICAL DATE : 19/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 1 OPERATOR : Mr. Kittipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas
STACK DESCRIPTION :

Height : 15.0 m Gas Velocity : 14.4 m/s
Diameter : 0.305 m Flow rate¹⁾ : 40.3 Ncu.m/min
Temperature : 164.0 °C Excess Oxygen : 19.7 %
Moisture : 5.8 %

PARAMETER	UNIT	ND	RESULT ¹⁾		STANDARD		REFERENCE
		(Non-detectable)	19.7%O ₂	g/s	Concentration	Emission Rate (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.00001	2 ²⁾ 1 ³⁾	0.001 ⁴⁾	US EPA Method 18
	mg/m ³	< 0.04	ND				

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Stk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 06/09/2022
RECEIVED DATE : 07/09/2022 ANALYTICAL DATE : 08/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 1 OPERATOR : Mr. Kittipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 28.6 m/s
Diameter : 0.305 m Flow rate^{1/} : 77.1 Nm³/min
Temperature : 182.5 °C Excess Oxygen : 19.9 %
Moisture : 5.2 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	19.9%O ₂	g/s	Concentration	Emission Rate (g/s)	METHOD
Oxide of Nitrogen	ppm	< 1.00	1.32	0.0032	85 ^{3/}	0.06 ^{3/}	US EPA Method 7
	mg/m ³	< 2.00	2.48				

Phatchara Samanchan
(Miss Phatchara Samanchan)

Analyst

REG.NO. 2-239-0-8183

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

REG. NO. 2-239-0-6419

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Stk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 06/09/2022
RECEIVED DATE : 07/09/2022 ANALYTICAL DATE : 19/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 1 OPERATOR : Mr. Kittipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 28.6 m/s
Diameter : 0.305 m Flow rate^{1/} : 77.1 Nm³/min
Temperature : 182.5 °C Excess Oxygen : 19.9 %
Moisture : 5.2 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	19.9%O ₂	g/s	Concentration	Emission Rate (g/s)	METHOD
1,3-Butadiene	ppm	< 0.01	ND	< 0.00003	2 ^{2/} , 1 ^{3/}	0.001 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222C28MON2H-Sik
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 07/09/2022
RECEIVED DATE : 08/09/2022 ANALYTICAL DATE : 09/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 1 OPERATOR : Mr. Kittipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas
STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 12.0 m/s
Diameter : 0.305 m Flow rate¹⁾ : 33.1 Ncu.m/min
Temperature : 171.8 °C Excess Oxygen : 19.8 %
Moisture : 5.8 %

PARAMETER	UNIT	ND (Non-detectable)	RESULT ¹⁾		STANDARD		REFERENCE
			19.8%O ₂	g/s	Concentration	Emission Rate (g/s)	
Oxide of Nitrogen	ppm	< 1.00	2.13	0.0022	85 ²⁾	0.06 ³⁾	US EPA Method 7
	mg/m ³	< 2.00	4.01				

Pratchara Samanchan
(Miss Pratchara Samanchan)

Analyst

REG.NO. 239-B-8183

Narisa Poonwasanetch
(Miss Narisa Poonwasanetch)

Technical Management Team

REG. NO. 239-B-6419

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4. ²⁾ Notification of the Ministry of Natural Resources and Environment, B.E.2557.

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 07/09/2022
RECEIVED DATE : 08/09/2022 ANALYTICAL DATE : 19/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 1 OPERATOR : Mr. Kittipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas
STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 12.0 m/s
Diameter : 0.305 m Flow rate¹⁾ : 33.1 Ncu.m/min
Temperature : 171.8 °C Excess Oxygen : 19.8 %
Moisture : 5.8 %

PARAMETER	UNIT	ND (Non-detectable)	RESULT ¹⁾		STANDARD		REFERENCE
			19.8%O ₂	g/s	Concentration	Emission Rate (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.00001	2 ²⁾ , 1 ³⁾	0.001 ³⁾	US EPA Method 18
	mg/m ³	< 0.04	ND				

Sudaporn Sonthorn
(Miss Sudaporn Sonthorn)

Analyst

Narisa Poonwasanetch
(Miss Narisa Poonwasanetch)

Technical Management Team

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 08/09/2022
RECEIVED DATE : 09/09/2022 ANALYTICAL DATE : 10/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase I OPERATOR : Mr. Kittipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas
STACK DESCRIPTION :

Height : 15.0 m Gas Velocity : 11.9 m/s
Diameter : 0.305 m Flow rate^{1/} : 32.5 Ncu.m/min
Temperature : 177.0 °C Excess Oxygen : 19.8 %
Moisture : 5.4 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	19.8% O ₂	g/s	Concentration	Emission Rate (g/s)	
Oxide of Nitrogen	ppm	< 1.00	3.40	0.0035	85 ^{3/}	0.06 ^{3/}	US EPA Method 7
	mg/m ³	< 2.00	6.40				

Phatchara Samanchan
(Miss Phatchara Samanchan)

Analyst

REG. NO. 7-239-B-8183

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

REG. NO. 7-239-B-6419

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 08/09/2022
RECEIVED DATE : 09/09/2022 ANALYTICAL DATE : 20/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase I OPERATOR : Mr. Kittipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas
STACK DESCRIPTION :

Height : 15.0 m Gas Velocity : 11.9 m/s
Diameter : 0.305 m Flow rate^{1/} : 32.5 Ncu.m/min
Temperature : 177.0 °C Excess Oxygen : 19.8 %
Moisture : 5.4 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	19.8% O ₂	g/s	Concentration	Emission Rate (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.00001	2 ^{2/} , 1 ^{3/}	0.001 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Suk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 09/09/2022
RECEIVED DATE : 10/09/2022 ANALYTICAL DATE : 11/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 1 OPERATOR : Mr. Kittipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 13.0 m/s
Diameter : 0.305 m Flow rate^{1/} : 35.3 Nm³/min
Temperature : 175.0 °C Excess Oxygen : 20.0 %
Moisture : 6.0 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.0%O ₂	g/s	Concentration	Emission Rate (g/s)	
Oxide of Nitrogen	ppm	< 1.00	1.97	0.0022	85 ^{3/}	0.06 ^{3/}	US EPA Method 7
	mg/m ³	< 2.00	3.71				

Phatchara Samanchan
(Miss Phatchara Samanchan)

Analyst

REG.NO. J-239-B-8183

Naimee Poonwasanpetch
(Miss Narisa Poonwasanpetch)

Technical Management Team

REG. NO. J-239-B-6419

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(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 09/09/2022
RECEIVED DATE : 10/09/2022 ANALYTICAL DATE : 11/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 1 OPERATOR : Mr. Kittipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 13.0 m/s
Diameter : 0.305 m Flow rate^{1/} : 35.3 Nm³/min
Temperature : 175.0 °C Excess Oxygen : 20.0 %
Moisture : 6.0 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.0%O ₂	g/s	Concentration	Emission Rate (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.00001	2 ^{2/} , 1 ^{3/}	0.001 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Naimee Poonwasanpetch
(Miss Narisa Poonwasanpetch)

Technical Management Team

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 10/09/2022
RECEIVED DATE : 11/09/2022 ANALYTICAL DATE : 12/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase I OPERATOR : Mr. Kittipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 13.7 m/s
Diameter : 0.305 m Flow rate¹⁾ : 37.8 Nm³/min
Temperature : 170.0 °C Excess Oxygen : 19.7 %
Moisture : 5.6 %

PARAMETER	UNIT	ND (Non-detectable)	RESULT ¹⁾ 19.7%O ₂ g/s	STANDARD Concentration Emission Rate (g/s)	REFERENCE METHOD
Oxide of Nitrogen	ppm	< 1.00	ND	85 ²⁾ 0.06 ³⁾	US EPA Method 7
	mg/m ³	< 2.00	ND		

Phatchara Samancharn
(Miss Phatchara Samancharn)

Analyst

REG.NO.7-239-9-8183

Narisa Poowasametch
(Miss Narisa Poowasametch)

Technical Management Team

REG. NO. 7-239-9-5419

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 10/09/2022
RECEIVED DATE : 11/09/2022 ANALYTICAL DATE : 11/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase I OPERATOR : Mr. Kittipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 13.7 m/s
Diameter : 0.305 m Flow rate¹⁾ : 37.8 Nm³/min
Temperature : 170.0 °C Excess Oxygen : 19.7 %
Moisture : 5.6 %

PARAMETER	UNIT	ND (Non-detectable)	RESULT ¹⁾ 19.7%O ₂ g/s	STANDARD Concentration Emission Rate (g/s)	REFERENCE METHOD
1,3-Butadiene	ppm	< 0.01	ND	2 ²⁾ , 1 ³⁾ 0.001 ³⁾	US EPA Method 18
	mg/m ³	< 0.04	ND		

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasametch
(Miss Narisa Poowasametch)

Technical Management Team

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

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3. ¹⁾ At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. ²⁾ Notification of the Ministry of Natural Resources and Environment, B.E.2557.

5. ³⁾ The assigned value in EIA report, B.E.2565.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Suk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 04/09/2022
RECEIVED DATE : 05/09/2022 ANALYTICAL DATE : 07/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 2 OPERATOR : Mr. Pissano Seenampeng
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 18.8 m/s
Diameter : 0.305 m Flow rate^{1/} : 50.0 Nm³/min
Temperature : 174.0 °C Excess Oxygen : 20.2 %
Moisture : 8.2 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.2%O ₂	g/s	Concentration	Emission Rate (g/s)	
Oxide of Nitrogen	ppm	< 1.00	1.43	0.0022	85 ^{3/}	0.06 ^{3/}	US EPA Method 7
	mg/m ³	< 2.00	2.69				

Phatchara Samanchan

(Miss Phatchara Samanchan)

* Analyst

REG. NO. 2-239-ก-8183

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG. NO. 2-239-ก-6419

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Suk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 04/09/2022
RECEIVED DATE : 05/09/2022 ANALYTICAL DATE : 19/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 2 OPERATOR : Mr. Pissano Seenampeng
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 18.8 m/s
Diameter : 0.305 m Flow rate^{1/} : 50.0 Nm³/min
Temperature : 174.0 °C Excess Oxygen : 20.2 %
Moisture : 8.2 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.2%O ₂	g/s	Concentration	Emission Rate (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.00002	2 ^{2/} , 1 ^{1/}	0.001 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : EST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(3EE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 05/09/2022
RECEIVED DATE : 06/09/2022 ANALYTICAL DATE : 07/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 2 OPERATOR : Mr. Pissanu Seenanpang
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 22.9 m/s
Diameter : 0.305 m Flow rate^{1/} : 60.8 Nm³/min
Temperature : 170.0 °C Excess Oxygen : 19.7 %
Moisture : 9.1 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	19.7%O ₂	g/s	Concentration	Emission Rate (g/s)	
Oxide of Nitrogen	ppm	< 1.00	1.77	0.0034	85 ^{3/}	0.06 ^{3/}	US EPA Method 7
	mg/m ³	< 2.00	3.33				

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG.NO. 7-239-9-8143

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG. NO. 7-239-ก-6419

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 05/09/2022
RECEIVED DATE : 06/09/2022 ANALYTICAL DATE : 19/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 2 OPERATOR : Mr. Pissanu Seenanpang
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 22.9 m/s
Diameter : 0.305 m Flow rate^{1/} : 60.8 Nm³/min
Temperature : 170.0 °C Excess Oxygen : 19.7 %
Moisture : 9.1 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	19.7%O ₂	g/s	Concentration	Emission Rate (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.00062	2 ^{2/} + 1 ^{3/}	0.001 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 06/09/2022
RECEIVED DATE : 07/09/2022 ANALYTICAL DATE : 08/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 2 OPERATOR : Mr. Pissanu Seenampeng
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas
STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 22.2 m/s
Diameter : 0.305 m Flow rate¹⁾ : 58.6 Ncu.m/min
Temperature : 170.0 °C Excess Oxygen : 19.8 %
Moisture : 9.7 %

PARAMETER	UNIT	ND	RESULT ¹⁾		STANDARD		REFERENCE
		(Non-detectable)	19.8%O ₂	g/s	Concentration	Emission Rate (g/s)	
Oxide of Nitrogen	ppm	< 1.60	1.79	0.0033	85 ²⁾	0.06 ³⁾	US EPA Method 7
	mg/m ³	< 2.60	3.37				

Phatchara Samanathan
(Miss Phatchara Samanathan)

Analyst

REG.NO. 2-239-8-8183

Narisa Poowasunpetch
(Miss Narisa Poowasunpetch)

Technical Management Team

REG. NO. 2-239-n-6419

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SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 06/09/2022
RECEIVED DATE : 07/09/2022 ANALYTICAL DATE : 19/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 2 OPERATOR : Mr. Pissanu Seenampeng
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas
STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 22.2 m/s
Diameter : 0.305 m Flow rate¹⁾ : 58.6 Ncu.m/min
Temperature : 170.0 °C Excess Oxygen : 19.8 %
Moisture : 9.7 %

PARAMETER	UNIT	ND	RESULT ¹⁾		STANDARD		REFERENCE
		(Non-detectable)	19.8%O ₂	g/s	Concentration	Emission Rate (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.00002	2 ²⁾ , 1 ³⁾	0.001 ⁴⁾	US EPA Method 18
	mg/m ³	< 0.04	ND				

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasunpetch
(Miss Narisa Poowasunpetch)

Technical Management Team

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Stk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 07/09/2022
RECEIVED DATE : 08/09/2022 ANALYTICAL DATE : 09/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 2 OPERATOR : Mr. Pissanu Seenampeng
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 9.4 m/s
Diameter : 0.305 m Flow rate^{1/} : 24.7 Nm³/min
Temperature : 177.0 °C Excess Oxygen : 19.6 %
Moisture : 9.3 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	19.6% O ₂	g/s	Concentration	Emission Rate (g/s)	
Oxide of Nitrogen	ppmv	< 1.00	2.32	0.0018	85 ^{2/}	0.06 ^{3/}	US EPA Method 7
	mg/m ³	< 2.00	4.37				

Phatchara Samanchart
(Miss Phatchara Samanchart)

Analyst

REG. NO. 7-239-9-K183

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

REG. NO. 7-239-9-6419

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Stk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 07/09/2022
RECEIVED DATE : 08/09/2022 ANALYTICAL DATE : 19/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 2 OPERATOR : Mr. Pissanu Seenampeng
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 9.4 m/s
Diameter : 0.305 m Flow rate^{1/} : 24.7 Nm³/min
Temperature : 177.0 °C Excess Oxygen : 19.6 %
Moisture : 9.3 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	19.6% O ₂	g/s	Concentration	Emission Rate (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.00001	2 ^{2/} , 1 ^{3/}	0.001 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Stk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 08/09/2022
RECEIVED DATE : 09/09/2022 ANALYTICAL DATE : 09/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 2 OPERATOR : Mr. Pissanu Seenampeng
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas
STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 10.1 m/s
Diameter : 0.305 m Flow rate^{1/} : 26.3 Ncu.m/min
Temperature : 179.0 °C Excess Oxygen : 19.7 %
Moisture : 9.1 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	19.7%O ₂	g/s	Concentration	Emission Rate (g/s)	
Oxide of Nitrogen	ppm	< 1.00	3.40	0.0028	85 ^{1/}	0.06 ^{3/}	US EPA Method 7
	mg/m ³	< 2.00	6.40				

Patchara Samanchan
(Miss Patchara Samanchan)

Analyst

REG. NO. 3-239-B-8183

Naris Poowasunpeich
(Miss Narisa Poowasunpeich)

Technical Management Team

REG. NO. 3-239-B-6419

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Stk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 08/09/2022
RECEIVED DATE : 09/09/2022 ANALYTICAL DATE : 20/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 2 OPERATOR : Mr. Pissanu Seenampeng
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas
STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 10.1 m/s
Diameter : 0.305 m Flow rate^{1/} : 26.3 Ncu.m/min
Temperature : 179.0 °C Excess Oxygen : 19.7 %
Moisture : 9.1 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	19.7%O ₂	g/s	Concentration	Emission Rate (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.00001	2 ^{2/} , 4 ^{3/}	0.001 ^{1/}	US EPA Method 18
	mg/m ³	< 0.04	ND				

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Naris Poowasunpeich
(Miss Narisa Poowasunpeich)

Technical Management Team

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SECOT CO.,LTD.

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STACK EMISSION ANALYSIS REPORT

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(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 09/09/2022
RECEIVED DATE : 10/09/2022 ANALYTICAL DATE : 11/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 2 OPERATOR : Mr. Pissanu Seenampeng
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 10.2 m/s
Diameter : 0.305 m Flow rate^{1/} : 27.6 Nm³/min
Temperature : 169.0 °C Excess Oxygen : 19.6 %
Moisture : 7.8 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	19.6%O ₂	g/s	Concentration	Emission Rate (g/s)	METHOD
Oxide of Nitrogen	ppm	< 1.00	ND	< 0.0009	85 ^{2/}	0.06 ^{3/}	US EPA Method 7
	mg/m ³	< 2.00	ND				

Phatchara Samanchan
(Miss Phatchara Samanchan)

Analyst

REG.NO.D-239-9-8183

Naimee Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

REG. NO. D-239-9-6419

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3. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. ^{2/} Notification of the Ministry of Natural Resources and Environment, B.E.2557.

5. ^{3/} The assigned value in EIA report, B.E.2565.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 09/09/2022
RECEIVED DATE : 10/09/2022 ANALYTICAL DATE : 11/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 2 OPERATOR : Mr. Pissanu Seenampeng
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 10.2 m/s
Diameter : 0.305 m Flow rate^{1/} : 27.6 Nm³/min
Temperature : 169.0 °C Excess Oxygen : 19.6 %
Moisture : 7.8 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	19.6%O ₂	g/s	Concentration	Emission Rate (g/s)	METHOD
1,3-Butadiene	ppm	< 0.01	ND	< 0.00001	2 ^{2/} , 1 ^{1/}	0.001 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Naimee Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

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4. ^{2/} Notification of the Ministry of Natural Resources and Environment, B.E.2557.

5. ^{3/} The assigned value in EIA report, B.E.2565.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 10/09/2022
RECEIVED DATE : 11/09/2022 ANALYTICAL DATE : 12/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 2 OPERATOR : Mr. Pissanu Seenanpung
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas
STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 10.4 m/s
Diameter : 0.305 m Flow rate^{1/} : 28.1 Ncu.m/min
Temperature : 173.0 °C Excess Oxygen : 19.7 %
Moisture : 7.5 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	19.7%O ₂	g/s	Concentration	Emission Rate (g/s)	
Oxide of Nitrogen	ppm	< 1.00	ND	< 0.0009	85 ^{3/}	0.06 ^{4/}	US EPA Method 7
	mg/m ³	< 2.00	ND				

Phatchara Samanchan
(Miss Phatchara Samanchan)

Analyst

REG.NO. 3-239-ก-8183

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

REG. NO. 3-239-ก-6419

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 10/09/2022
RECEIVED DATE : 11/09/2022 ANALYTICAL DATE : 11/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : DFTO Phase 2 OPERATOR : Mr. Pissanu Seenanpung
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas
STACK DESCRIPTION

Height : 15.0 m Gas Velocity : 10.4 m/s
Diameter : 0.305 m Flow rate^{1/} : 28.1 Ncu.m/min
Temperature : 173.0 °C Excess Oxygen : 19.7 %
Moisture : 7.5 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	19.7%O ₂	g/s	Concentration	Emission Rate (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.00001	2 ^{2/} , 1 ^{3/}	0.001 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)

SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 04/09/2022

RECEIVED DATE : 05/09/2022 ANALYTICAL DATE : 07/09/2022

REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal

STACK LOCATION : RTO Phase 1 OPERATOR : Mr. Kitipong Thakoengsuk

SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 7.6 m/s

Diameter : 1.8 m Flow rate : 760 Ncu.m/min

Temperature : 142.3 °C Excess Oxygen : 20.3 %

Moisture : 8.2 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.3%O ₂	g/s	Concentration	Emission (g/s)	
Oxide of Nitrogen	ppm	< 1.00	1.44	0.0343	4.4 ^{2/}	0.24 ^{3/}	US EPA Method 7
	mg/m ³	< 2.00	2.71				

Phatchara Samatchan

(Miss Phatchara Samatchan)

Analyst

REG NO. 2-239-8-8183

Narisu Poowasanpetch

(Miss Narisu Poowasanpetch)

Technical Management Team

REG. NO. 2-239-8-6419

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6. - No Standard.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)

SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 04/09/2022

RECEIVED DATE : 05/09/2022 ANALYTICAL DATE : 06, 19-20/09/2022

REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal

STACK LOCATION : RTO Phase 1 OPERATOR : Mr. Kitipong Thakoengsuk

SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 7.6 m/s

Diameter : 1.8 m Flow rate : 760 Ncu.m/min

Temperature : 142.3 °C Excess Oxygen : 20.3 %

Moisture : 8.2 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.3%O ₂	g/s	Concentration	Emission (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.0003	2.0 ^{2/}	0.006 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Total Hydrocarbon	ppm	< 0.10	39.40	0.9006	-	-	Flame Ionization Detection
	mg/m ³	< 0.18	71.07				
Tetrahydrofuran	ppm	< 0.01	ND	< 0.0004	1.5 ^{2/}	0.129 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Cyclohexane	ppm	< 0.01	4.79	0.2090	14.5 ^{2/}	1.698 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	16.49				
n-Heptane	ppm	< 0.01	0.49	0.0255	1.5 ^{2/}	0.179 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	2.01				
Styrene	ppm	< 0.01	ND	< 0.0005	1 ^{2/}	0.124 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Toluene	ppm	< 0.01	0.15	0.0072	1 ^{2/}	0.11 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	0.57				

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

Narisu Poowasanpetch

(Miss Narisu Poowasanpetch)

Technical Management Team

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6. - No Standard.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Stk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 05/09/2022
RECEIVED DATE : 06/09/2022 ANALYTICAL DATE : 07/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase I OPERATOR : Mr. Kittipong Thakongsaek
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 8.4 m/s
Diameter : 1.8 m Flow rate^{1/} : 820 Ncu.m/min
Temperature : 146.0 °C Excess Oxygen : 20.2 %
Moisture : 9.1 %

PARAMETER	UNIT	ND		RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.2% O ₂	g/s	Concentration	Emission (g/s)	METHOD	
Oxide of Nitrogen	ppm	< 1.00	ND	< 0.0257	4.4 ^{1/}	0.24 ^{3/}	US EPA Method 7	
	mg/m ³	< 2.00	ND					

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG. NO. 2-239-B-8183

Narisara Poowasanpech

(Miss Narisa Poowasanpech)

Technical Management Team

REG. NO. 2-239-B-6419

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6. - No Standard.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Stk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 05/09/2022
RECEIVED DATE : 06/09/2022 ANALYTICAL DATE : 07/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase I OPERATOR : Mr. Kittipong Thakongsaek
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 8.4 m/s
Diameter : 1.8 m Flow rate^{1/} : 820 Ncu.m/min
Temperature : 146.0 °C Excess Oxygen : 20.2 %
Moisture : 9.1 %

PARAMETER	UNIT	ND		RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.2% O ₂	g/s	Concentration	Emission (g/s)	METHOD	
1,3-Butadiene	ppm	< 0.01	ND	< 0.0003	2.0 ^{1/}	0.006 ^{3/}	US EPA Method 18	
	mg/m ³	< 0.04	ND					
Total Hydrocarbon	ppm	< 0.10	47.80	1.1785			Flame Ionization Detection	
	mg/m ³	< 0.18	86.22					
Tetrahydrofuran	ppm	< 0.01	ND	< 0.0004	1.5 ^{1/}	0.129 ^{3/}	US EPA Method 18	
	mg/m ³	< 0.04	ND					
Cyclohexane	ppm	< 0.01	3.97	0.1868	1.5 ^{1/}	1.698 ^{3/}	US EPA Method 18	
	mg/m ³	< 0.04	13.67					
n-Heptane	ppm	< 0.01	0.36	0.0202	1.5 ^{1/}	0.179 ^{3/}	US EPA Method 18	
	mg/m ³	< 0.04	1.48					
Styrene	ppm	< 0.01	ND	< 0.0006	1 ^{1/}	0.124 ^{1/}	US EPA Method 18	
	mg/m ³	< 0.04	ND					
Toluene	ppm	< 0.01	0.12	0.0062	1 ^{1/}	0.11 ^{1/}	US EPA Method 18	
	mg/m ³	< 0.04	0.45					

Sudaporn Suonthorn

(Miss Sudaporn Suonthorn)

Analyst

Narisara Poowasanpech

(Miss Narisa Poowasanpech)

Technical Management Team

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4. ^{2/} Notification of the Ministry of Natural Resources and Environment, B.E.2557.
5. ^{3/} The assigned value in EIA report, B.E.2565.
6. - No Standard.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)

SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 06/09/2022

RECEIVED DATE : 07/09/2022 ANALYTICAL DATE : 08/09/2022

REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal

STACK LOCATION : RTO Phase 1 OPERATOR : Mr. Kittipong Thakongsuk

SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 5.0 m/s

Diameter : 1.8 m Flow rate : 483 Nm³/min

Temperature : 148.0 °C Excess Oxygen : 20.2 %

Moisture : 9.6 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.2%O ₂	g/s	Concentration	Emission (g/s)	METHOD
Oxide of Nitrogen	ppm	< 1.00	1.41	0.0214	4.4 ^{3/}	0.24 ^{3/}	US EPA Method 7
	mg/m ³	< 2.00	2.65				

Phatchara Samanchan
(Miss Phatchara Samanchan)

Analyst

REG.NO. 7-239-B-8183

Naime Poowasanetch
(Miss Narisa Poowasanetch)

Technical Management Team

REG. NO. 7-239-B-6419

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6. - No Standard.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)

SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 06/09/2022

RECEIVED DATE : 07/09/2022 ANALYTICAL DATE : 08/19/20/09/2022

REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal

STACK LOCATION : RTO Phase 1 OPERATOR : Mr. Kittipong Thakongsuk

SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 5.0 m/s

Diameter : 1.8 m Flow rate : 483 Nm³/min

Temperature : 148.0 °C Excess Oxygen : 20.2 %

Moisture : 9.6 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.2%O ₂	g/s	Concentration	Emission (g/s)	METHOD
1,3-Butadiene	ppm	< 0.01	ND	< 0.0002	2 ^{2/} , 0.1 ^{3/}	0.006 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Total Hydrocarbon	ppm	< 0.10	41.70	0.6053			Flame Ionization Detection
	mg/m ³	< 0.18	75.21				
Tetrahydrofuran	ppm	< 0.01	ND	< 0.0002	1.5 ^{3/}	0.129 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Cyclohexane	ppm	< 0.01	4.65	0.1288	14.5 ^{3/}	1.698 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	16.01				
n-Heptane	ppm	< 0.01	0.46	0.0152	1.5 ^{3/}	0.179 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	1.89				
Styrene	ppm	< 0.01	ND	< 0.0003	1 ^{3/}	0.124 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Toluene	ppm	< 0.01	0.13	0.0039	1 ^{3/}	0.11 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	0.49				

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Naime Poowasanetch
(Miss Narisa Poowasanetch)

Technical Management Team

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6. - No Standard.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 07/09/2022
RECEIVED DATE : 08/09/2022 ANALYTICAL DATE : 08/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase I OPERATOR : Mr. Kitipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 2.6 m/s
Diameter : 1.8 m Flow rate¹⁾ : 273 Nm³/min
Temperature : 113.3 °C Excess Oxygen : 20.2 %
Moisture : 8.6 %

PARAMETER	UNIT	ND		RESULT ¹⁾		STANDARD		REFERENCE
		(Non-detectable)	20.2% O ₂	g/s	Concentration	Emission (g/s)	METHOD	
Oxide of Nitrogen	ppm	< 1.00	1.42	0.0121	4.6 ²⁾	0.24 ³⁾	US EPA Method 7	
	mg/m ³	< 2.00	2.67					

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG. NO. 3-239-B-8183

Narin Panyasamphet

(Miss Narin Panyasamphet)

Technical Management Team

REG. NO. 3-239-B-6419

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5. ³⁾ The assigned value in EIA report, B.E.2565.

6. - No Standard.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 07/09/2022
RECEIVED DATE : 08/09/2022 ANALYTICAL DATE : 09.19.2009/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase I OPERATOR : Mr. Kitipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 2.6 m/s
Diameter : 1.8 m Flow rate¹⁾ : 273 Nm³/min
Temperature : 113.3 °C Excess Oxygen : 20.2 %
Moisture : 8.6 %

PARAMETER	UNIT	ND		RESULT ¹⁾		STANDARD		REFERENCE
		(Non-detectable)	20.2% O ₂	g/s	Concentration	Emission (g/s)	METHOD	
1,3-Butadiene	ppm	< 0.01	ND	< 0.0001	2 ²⁾ , 0.1 ³⁾	0.006 ³⁾	US EPA Method 18	
	mg/m ³	< 0.04	ND					
Total Hydrocarbon	ppm	< 0.10	11.90	0.0975			Flame Ionization Detection	
	mg/m ³	< 0.18	21.46					
Tetrahydrofuran	ppm	< 0.01	ND	< 0.0001	1.5 ⁴⁾	0.129 ³⁾	US EPA Method 18	
	mg/m ³	< 0.04	ND					
Cyclohexane	ppm	< 0.01	2.34	0.0366	14.5 ³⁾	1.698 ³⁾	US EPA Method 18	
	mg/m ³	< 0.04	8.05					
n-Heptane	ppm	< 0.01	0.21	0.0039	1.5 ³⁾	0.179 ³⁾	US EPA Method 18	
	mg/m ³	< 0.04	0.86					
Styrene	ppm	< 0.01	ND	< 0.0002	1 ⁴⁾	0.124 ³⁾	US EPA Method 18	
	mg/m ³	< 0.04	ND					
Toluene	ppm	< 0.01	0.06	0.0010	1 ³⁾	0.11 ³⁾	US EPA Method 18	
	mg/m ³	< 0.04	0.23					

Subaporn Soonthorn

(Miss Subaporn Soonthorn)

Analyst

Narin Panyasamphet

(Miss Narin Panyasamphet)

Technical Management Team

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6. - No Standard.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 08/09/2022
RECEIVED DATE : 09/09/2022 ANALYTICAL DATE : 09/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase I OPERATOR : Mr. Kitipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 3.2 m/s
Diameter : 1.8 m Flow rate : 316 Nm³/min
Temperature : 146.0 °C Excess Oxygen : 20.2 %
Moisture : 9.5 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.2%O ₂	g/s	Concentration	Emission (g/s)	
Oxide of Nitrogen	ppm	< 1.00	1.82	0.0180	4.4 ^{2/}	0.24 ^{3/}	US EPA Method 7
	mg/m ³	< 2.00	3.42				

Phatchara Saman Chan
(Miss Phatchara Saman Chan)

Analyst

REG.NO. 2-239-0-8183

Narisa Poonwasanpeich
(Miss Narisa Poonwasanpeich)

Technical Management Team

REG. NO. 2-239-0-6419

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 08/09/2022
RECEIVED DATE : 09/09/2022 ANALYTICAL DATE : 10, 19-20/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase I OPERATOR : Mr. Kitipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 3.2 m/s
Diameter : 1.8 m Flow rate : 316 Nm³/min
Temperature : 146.0 °C Excess Oxygen : 20.2 %
Moisture : 9.5 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.2%O ₂	g/s	Concentration	Emission (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.0001	2 ^{2/} , 0.1 ^{3/}	0.006 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Total Hydrocarbon	ppm	< 0.10	18.70	0.1776			Flame Ionization Detection
	mg/m ³	< 0.18	33.73				
Tetrahydrofuran	ppm	< 0.01	ND	< 0.0002	1.5 ^{3/}	0.129 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Cyclohexane	ppm	< 0.01	2.65	0.0460	14.5 ^{3/}	1.698 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	9.12				
n-Heptane	ppm	< 0.01	0.23	0.0050	1.5 ^{3/}	0.179 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	0.34				
Styrene	ppm	< 0.01	ND	< 0.0002	1 ^{3/}	0.124 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Toluene	ppm	< 0.01	0.10	0.0020	1 ^{3/}	0.11 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	0.38				

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)
Analyst

Narisa Poonwasanpeich
(Miss Narisa Poonwasanpeich)
Technical Management Team

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sk
(REE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 09/09/2022
RECEIVED DATE : 09/09/2022 ANALYTICAL DATE : 09/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase 1 OPERATOR : Mr. Kitipong Thakoengsak
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 5.9 m/s
Diameter : 1.8 m Flow rate^{1/} : 575 Nm³/min
Temperature : 149.0 °C Excess Oxygen : 20.2 %
Moisture : 9.5 %

PARAMETER	UNIT	ND		RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.2%O ₂	g/s	Concentration	Emission (g/s)	METHOD	
Oxide of Nitrogen	ppm	< 1.00	1.71	0.0308	4.4 ^{3/}	0.24 ^{3/}	US EPA Method 7	
	mg/m ³	< 2.00	3.22					

Phatchara Samnanchan

(Miss Phatchara Samnanchan)

Analyst

REG. NO. 2-239-B-8183

Narisa Poowasanpet

(Miss Narisa Poowasanpet)

Technical Management Team

REG. NO. 2-239-B-6419

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sk
(BET)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 09/09/2022
RECEIVED DATE : 10/09/2022 ANALYTICAL DATE : 11, 19-20/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase 1 OPERATOR : Mr. Kitipong Thakoengsak
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 5.9 m/s
Diameter : 1.8 m Flow rate^{1/} : 575 Nm³/min
Temperature : 149.0 °C Excess Oxygen : 20.2 %
Moisture : 9.5 %

PARAMETER	UNIT	ND		RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.2%O ₂	g/s	Concentration	Emission (g/s)	METHOD	
1,3-Butadiene	ppm	< 0.01	ND	< 0.0002	2.01 ^{3/}	0.006 ^{3/}	US EPA Method 18	
	mg/m ³	< 0.04	ND					
Total Hydrocarbon	ppm	< 0.10	17.21	0.2975			Flame Ionization Detection	
	mg/m ³	< 0.18	31.04					
Tetrahydrofuran	ppm	< 0.01	ND	< 0.0003	1.5 ^{3/}	0.129 ^{3/}	US EPA Method 18	
	mg/m ³	< 0.04	ND					
Cyclohexane	ppm	< 0.01	4.38	0.1445	14.5 ^{3/}	1.698 ^{3/}	US EPA Method 18	
	mg/m ³	< 0.04	15.08					
n-Heptane	ppm	< 0.01	0.40	0.0157	1.5 ^{3/}	0.179 ^{3/}	US EPA Method 18	
	mg/m ³	< 0.04	1.64					
Styrene	ppm	< 0.01	ND	< 0.0004	1 ^{3/}	0.124 ^{3/}	US EPA Method 18	
	mg/m ³	< 0.04	ND					
Toluene	ppm	< 0.01	0.16	0.0058	1 ^{3/}	0.11 ^{3/}	US EPA Method 18	
	mg/m ³	< 0.04	0.60					

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpet

(Miss Narisa Poowasanpet)

Technical Management Team

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Stk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 10/09/2022
RECEIVED DATE : 11/09/2022 ANALYTICAL DATE : 12/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase 1 OPERATOR : Mr. Kittipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 5.3 m/s
Diameter : 1.8 m Flow rate^{1/} : 521 Nm³/min
Temperature : 144.0 °C Excess Oxygen : 20.0 %
Moisture : 9.7 %

PARAMETER	UNIT	ND		RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.0% O ₂	g/s	Concentration	Emission (g/s)	METHOD	
Oxide of Nitrogen	ppm	< 1.00	ND	< 0.0163	4.4 ^{3/}	0.24 ^{3/}	US EPA Method 7	
	mg/m ³	< 2.00	ND					

Phatchara Samanchoo
(Miss Phatchara Samanchoo)

Analyst

REG.NO. 2-259-B-8183

Naimee Poowasanpetch
(Miss Naimee Poowasanpetch)

Technical Management Team

REG. NO. 2-239-B-6419

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Stk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 10/09/2022
RECEIVED DATE : 11/09/2022 ANALYTICAL DATE : 12/09/2022
REPORT DATE : 28/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase 1 OPERATOR : Mr. Kittipong Thakoengsuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

Height : 45.0 m Gas Velocity : 5.3 m/s
Diameter : 1.8 m Flow rate^{1/} : 521 Nm³/min
Temperature : 144.0 °C Excess Oxygen : 20.0 %
Moisture : 9.7 %

PARAMETER	UNIT	ND		RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.0% O ₂	g/s	Concentration	Emission (g/s)	METHOD	
1,3-Butadiene	ppm	< 0.01	ND	< 0.0002	2 ^{3/} , 0.1 ^{3/}	0.006 ^{3/}	US EPA Method 18	
	mg/m ³	< 0.04	ND					
Total Hydrocarbon	ppm	< 0.10	51.90	0.8127	-	-	Flame Ionization Detection	
	mg/m ³	< 0.18	93.61					
Tetrahydrofuran	ppm	< 0.01	ND	< 0.0003	1.5 ^{3/}	0.129 ^{3/}	US EPA Method 18	
	mg/m ³	< 0.04	ND					
Cyclohexane	ppm	< 0.01	4.40	0.1315	14.5 ^{3/}	1.698 ^{3/}	US EPA Method 18	
	mg/m ³	< 0.04	15.15					
n-Heptane	ppm	< 0.01	0.44	0.0157	1.5 ^{3/}	0.179 ^{3/}	US EPA Method 18	
	mg/m ³	< 0.04	1.80					
Styrene	ppm	< 0.01	ND	< 0.0004	1 ^{3/}	0.124 ^{3/}	US EPA Method 18	
	mg/m ³	< 0.04	ND					
Toluene	ppm	< 0.01	0.17	0.0056	1 ^{3/}	0.11 ^{3/}	US EPA Method 18	
	mg/m ³	< 0.04	0.64					

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Naimee Poowasanpetch
(Miss Naimee Poowasanpetch)

Technical Management Team

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6. - No Standard.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Stk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 12/09/2022
RECEIVED DATE : 13/09/2022 ANALYTICAL DATE : 16/09/2022
REPORT DATE : 29/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase 2 OPERATOR : Mr. Supakit Tamooka
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 8.8 m/s
Diameter : 1.8 m Flow rate ^{1/} : 993 Nm³/min
Temperature : 98.8 °C Excess Oxygen : 20.1 %
Moisture : 7.7 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.1% O ₂	g/s	Concentration	Emission (g/s)	
Oxide of Nitrogen	ppm	< 1.00	ND	< 0.0311	4.4 ^{2/}	0.24 ^{3/}	US EPA Method 7
	mg/m ³	< 2.00	ND				

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG. NO. 2-239-8-8183

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

REG. NO. 2-239-8-6419

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Stk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 12/09/2022
RECEIVED DATE : 13/09/2022 ANALYTICAL DATE : 13, 21-22/09/2022
REPORT DATE : 29/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase 2 OPERATOR : Mr. Supakit Tamooka
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 8.8 m/s
Diameter : 1.8 m Flow rate ^{1/} : 993 Nm³/min
Temperature : 98.8 °C Excess Oxygen : 20.1 %
Moisture : 7.7 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.1% O ₂	g/s	Concentration	Emission (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.0004	2.0 ^{2/}	0.006 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Total Hydrocarbon	ppm	< 0.10	52.60	1.5701			Flame Ionization Detection
	mg/m ³	< 0.18	94.87				
Tetrahydrofuran	ppm	< 0.01	ND	< 0.0005	1.5 ^{2/}	0.129 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Cyclohexane	ppm	< 0.01	5.08	0.2894	14.5 ^{2/}	1.698 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	17.49				
n-Heptane	ppm	< 0.01	1.02	0.0692	1.5 ^{2/}	0.179 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	4.18				
Styrene	ppm	< 0.01	ND	< 0.0007	1 ^{2/}	0.124 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Toluene	ppm	< 0.01	0.17	0.0106	1 ^{2/}	0.11 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	0.64				

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch

(Miss Narisa Poowasanpetch)

Technical Management Team

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6. - No Standard.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 13/09/2022
RECEIVED DATE : 14/09/2022 ANALYTICAL DATE : 16/09/2022
REPORT DATE : 29/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase 2 OPERATOR : Mr. Supakit Tamooka
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION
Height : 45.0 m Gas Velocity : 3.1 m/s
Diameter : 1.8 m Flow rate^{1/} : 365 Ncu.m/min
Temperature : 77.3 °C Excess Oxygen : 20.6 %
Moisture : 7.3 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.6%O ₂	g/s	Concentration	Emission (g/s)	
Ox.de of Nitrogen	ppm	< 1.00	ND	<0.0114	4.4 ^{2/}	0.24 ^{3/}	US EPA Method 7
	mg/m ³	< 2.00	ND				

Phatchara Samancharn
(Miss Phatchara Samancharn)

Analyst

REG.NO. 2-239-8-8183

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

REG. NO. 2-239-n-6419

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5. ^{3/} The assigned value in EIA report, B.E.2565.
6. - No Standard.



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SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 13/09/2022
RECEIVED DATE : 14/09/2022 ANALYTICAL DATE : 14, 21-22/09/2022
REPORT DATE : 29/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase 2 OPERATOR : Mr. Supakit Tamooka
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION
Height : 45.0 m Gas Velocity : 3.1 m/s
Diameter : 1.8 m Flow rate^{1/} : 365 Ncu.m/min
Temperature : 77.3 °C Excess Oxygen : 20.6 %
Moisture : 7.3 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.6%O ₂	µ/s	Concentration	Emission (µ/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.0001	2 ^{2/} , 0.1 ^{3/}	0.006 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Total Hydrocarbon	ppm	< 0.10	43.40	0.4761			Flame Ionization Detection
	mg/m ³	< 0.18	78.28				
Tetrahydrofuran	ppm	< 0.01	ND	< 0.0002	1.5 ^{3/}	0.129 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Cyclohexane	ppm	< 0.01	6.44	0.1348	14.5 ^{3/}	1.698 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	22.17				
n-Heptane	ppm	< 0.01	1.26	0.0314	1.5 ^{3/}	0.179 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	0.03				
Styrene	ppm	< 0.01	ND	< 0.0003	1 ^{3/}	0.124 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Toluene	ppm	< 0.01	0.10	0.0023	1 ^{3/}	0.11 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	0.18				

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowasanpetch
(Miss Narisa Poowasanpetch)

Technical Management Team

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)

SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 14/09/2022

RECEIVED DATE : 15/09/2022 ANALYTICAL DATE : 17/09/2022

REPORT DATE : 29/09/2022 SAMPLE CONDITION : Normal

STACK LOCATION : RTO Phase 2 OPERATOR : Mr. Supakit Tamcooka

SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 5.4 m/s

Diameter : 1.8 m Flow rateⁱⁱ : 591 Nm³/min

Temperature : 104.0 °C Excess Oxygen : 20.5 %

Moisture : 7.9 %

PARAMETER	UNIT	ND	RESULT ⁱⁱ		STANDARD		REFERENCE
		(Non-detectable)	20.5%O ₂	g/s	Concentration	Emission (g/s)	
Oxide of Nitrogen	ppm	< 1.00	ND	< 0.0185	4.4 ⁱⁱ	0.24 ⁱⁱⁱ	US EPA Method 7
	mg/m ³	< 2.00	ND				

Phatchara Sammanchan

(Miss Phatchara Sammanchan)

Analyst

REG. NO. 3-239-0-8183

Naris Puwasanpetch

(Miss Narisa Puwasanpetch)

Technical Management Team

REG. NO. 3-239-0-6419

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6. - No Standard.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEE)

SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 14/09/2022

RECEIVED DATE : 15/09/2022 ANALYTICAL DATE : 15, 21-22/09/2022

REPORT DATE : 29/09/2022 SAMPLE CONDITION : Normal

STACK LOCATION : RTO Phase 2 OPERATOR : Mr. Supakit Tamcooka

SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 5.4 m/s

Diameter : 1.8 m Flow rateⁱⁱ : 591 Nm³/min

Temperature : 104.0 °C Excess Oxygen : 20.5 %

Moisture : 7.9 %

PARAMETER	UNIT	ND	RESULT ⁱⁱ		STANDARD		REFERENCE
		(Non-detectable)	20.5%O ₂	g/s	Concentration	Emission (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.0002	2 ⁱⁱ , 0.1 ^{iv}	0.006 ^v	US EPA Method 18
	mg/m ³	< 0.04	ND				
Total Hydrocarbon	ppm	< 0.10	66.20	1.1767	*	*	Flame Ionization Detection
	mg/m ³	< 0.18	119.40				
Tetrahydrofuran	ppm	< 0.01	ND	< 0.0003	1.5 ^{iv}	0.129 ^v	US EPA Method 18
	mg/m ³	< 0.04	ND				
Cyclohexane	ppm	< 0.01	8.05	0.2731	14.5 ^{iv}	1.698 ^v	US EPA Method 18
	mg/m ³	< 0.04	27.71				
n-Heptane	ppm	< 0.01	1.14	0.0460	1.5 ^{iv}	0.179 ^v	US EPA Method 18
	mg/m ³	< 0.04	4.67				
Styrene	ppm	< 0.01	ND	< 0.0004	1 ^{iv}	0.124 ^v	US EPA Method 18
	mg/m ³	< 0.04	ND				
Toluene	ppm	< 0.01	0.17	0.0063	1 ^{iv}	0.11 ^v	US EPA Method 18
	mg/m ³	< 0.04	0.64				

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

Naris Puwasanpetch

(Miss Narisa Puwasanpetch)

Technical Management Team

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6. - No Standard.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST FNEOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 15/09/2022
RECEIVED DATE : 16/09/2022 ANALYTICAL DATE : 17/09/2022
REPORT DATE : 29/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase 2 OPERATOR : Mr. Kittipong Thakoensuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 5.6 m/s
Diameter : 1.8 m Flow rate^{1/} : 607 Nm³/min
Temperature : 110.3 °C Excess Oxygen : 20.4 %
Moisture : 8.2 %

PARAMETER	UNIT	ND (Non-detectable)	RESULT ^{1/}		STANDARD		REFERENCE METHOD
			20.4% O ₂	g/s	Concentration	Emission (g/s)	
Oxide of Nitrogen	ppm	< 1.00	ND	<0.0191	4.4 ^{3/}	0.24 ^{3/}	US EPA Method 7
	mg/m ³	< 2.00	ND				

Phatchara Samnchan

(Miss Phatchara Samnchan)

Analyst

REG. NO. 2-239-0-8183

Minin Poovanapetch

(Miss Nariss Poovanapetch)

Technical Management Team

REG. NO. 2-239-0-6419

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STACK EMISSION ANALYSIS REPORT

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RECEIVED DATE : 16/09/2022 ANALYTICAL DATE : 16, 21-22/09/2022
REPORT DATE : 29/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase 2 OPERATOR : Mr. Kittipong Thakoensuk
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 5.6 m/s
Diameter : 1.8 m Flow rate^{1/} : 607 Nm³/min
Temperature : 110.3 °C Excess Oxygen : 20.4 %
Moisture : 8.2 %

PARAMETER	UNIT	ND (Non-detectable)	RESULT ^{1/}		STANDARD		REFERENCE METHOD
			20.4% O ₂	g/s	Concentration	Emission (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.0002	2 ^{2/} , 0.1 ^{3/}	0.006 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Total Hydrocarbon	ppm	< 0.10	33.80	0.6172	-	-	Flame Ionization Detection
	mg/m ³	< 0.18	60.96				
Tetrahydrofuran	ppm	< 0.01	ND	< 0.0003	1.5 ^{3/}	0.129 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Cyclohexane	ppm	< 0.01	8.86	0.3088	14.5 ^{3/}	1.698 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	30.50				
n-Heptane	ppm	< 0.01	1.32	0.0548	1.5 ^{3/}	0.179 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	5.41				
Styrene	ppm	< 0.01	ND	< 0.0004	1 ^{3/}	0.124 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Toluene	ppm	< 0.01	0.17	0.0065	1 ^{3/}	0.11 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	0.64				

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

Minin Poovanapetch

(Miss Nariss Poovanapetch)

Technical Management Team

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENBOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 16/09/2022
RECEIVED DATE : 17/09/2022 ANALYTICAL DATE : 17/09/2022
REPORT DATE : 29/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase 2 OPERATOR : Mr. Pisana Soanampeng
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 10.0 m/s
Diameter : 1.8 m Flow rate^{1/} : 1,092 Nm³/min
Temperature : 111.0 °C Excess Oxygen : 20.6 %
Moisture : 7.5 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.6% O ₂	g/s	Concentration	Emission (g/s)	
Oxide of Nitrogen	ppm	< 1.00	ND	<0.0342	4.4 ^{1/}	0.24 ^{3/}	US EPA Method 7
	mg/m ³	< 2.00	ND				

Phatchara Samanchon
(Miss Phatchara Samanchon)

Analyst

REG.NO. 1-239-A-8183

Narisa Poowanpetch
(Miss Narisa Poowanpetch)

Technical Management Team

REG.NO. 2-239-R-6419

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CLIENT NAME : BST ENBOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sk
(BEE)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 16/09/2022
RECEIVED DATE : 17/09/2022 ANALYTICAL DATE : 17, 21-22/09/2022
REPORT DATE : 29/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase 2 OPERATOR : Mr. Pisana Soanampeng
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 10.0 m/s
Diameter : 1.8 m Flow rate^{1/} : 1,092 Nm³/min
Temperature : 111.0 °C Excess Oxygen : 20.6 %
Moisture : 7.5 %

PARAMETER	UNIT	ND	RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.6% O ₂	g/s	Concentration	Emission (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.0004	2 ^{2/} , 0.1 ^{3/}	0.006 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Total Hydrocarbon	ppm	< 0.10	63.80	2.0940			Flame Ionization Detection
	mg/m ³	< 0.18	115.07				
Tetrahydrofuran	ppm	< 0.01	ND	< 0.0005	1.5 ^{2/}	0.129 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Cyclohexane	ppm	< 0.01	8.95	0.5606	14.5 ^{2/}	1.698 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	30.81				
n-Heptane	ppm	< 0.01	1.32	0.0984	1.5 ^{2/}	0.179 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	5.41				
Styrene	ppm	< 0.01	ND	< 0.0008	1 ^{2/}	0.124 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	ND				
Toluene	ppm	< 0.01	0.18	0.0123	1 ^{2/}	0.11 ^{3/}	US EPA Method 18
	mg/m ³	< 0.04	0.68				

Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Analyst

Narisa Poowanpetch
(Miss Narisa Poowanpetch)

Technical Management Team

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6. - No Standard.



บริษัท ซีคอต จำกัด

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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Stk
(BEE)

SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 17/09/2022

RECEIVED DATE : 19/09/2022 ANALYTICAL DATE : 19/09/2022

REPORT DATE : 29/09/2022 SAMPLE CONDITION : Normal

STACK LOCATION : RTO Phase 2 OPERATOR : Mr. Pisanu Seenampong

SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 5.7 m/s

Diameter : 1.8 m Flow rate^{1/} : 639 Nm³/min

Temperature : 109.0 °C Excess Oxygen : 20.6 %

Moisture : 5.8 %

PARAMETER	UNIT	ND			RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.6% O ₂	g/s	Concentration	Emission (g/s)	Concentration	Emission (g/s)	
Oxide of Nitrogen	ppm	< 1.00	ND	< 0.0200	4.4 ^{3/}	0.24 ^{3/}	US EPA Method 7		
	mg/m ³	< 2.00	ND						

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG. NO. 2-239-B-1813

Naris Poonwasupetch

(Miss Narisa Poonwasupetch)

Technical Management Team

REG. NO. 2-239-B-6419

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6. - No Standard.



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STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Stk
(BEE)

SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 17/09/2022

RECEIVED DATE : 19/09/2022 ANALYTICAL DATE : 19, 21-22/09/2022

REPORT DATE : 29/09/2022 SAMPLE CONDITION : Normal

STACK LOCATION : RTO Phase 2 OPERATOR : Mr. Pisanu Seenampong

SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

Height : 45.0 m Gas Velocity : 5.7 m/s

Diameter : 1.8 m Flow rate^{1/} : 639 Nm³/min

Temperature : 109.0 °C Excess Oxygen : 20.6 %

Moisture : 5.8 %

PARAMETER	UNIT	ND			RESULT ^{1/}		STANDARD		REFERENCE
		(Non-detectable)	20.6% O ₂	g/s	Concentration	Emission (g/s)	Concentration	Emission (g/s)	
1,3-Butadiene	ppm	< 0.01	ND	< 0.0002	2.1 ^{3/}	0.006 ^{3/}	US EPA Method 18		
	mg/m ³	< 0.04	ND						
Total Hydrocarbon	ppm	< 0.10	54.90	1.0551			Flame Ionization Detection		
	mg/m ³	< 0.18	99.02						
Tetrahydrofuran	ppm	< 0.01	ND	< 0.0003	1.5 ^{3/}	0.129 ^{3/}	US EPA Method 18		
	mg/m ³	< 0.04	ND						
Cyclohexane	ppm	< 0.01	9.01	0.3304	14.5 ^{3/}	1.698 ^{3/}	US EPA Method 18		
	mg/m ³	< 0.04	31.01						
n-Heptane	ppm	< 0.01	1.20	0.0524	1.5 ^{3/}	0.179 ^{3/}	US EPA Method 18		
	mg/m ³	< 0.04	4.92						
Styrene	ppm	< 0.01	ND	< 0.0005	1 ^{3/}	0.124 ^{3/}	US EPA Method 18		
	mg/m ³	< 0.04	ND						
Toluene	ppm	< 0.01	0.19	0.0076	1 ^{3/}	0.11 ^{3/}	US EPA Method 18		
	mg/m ³	< 0.04	0.72						

Sudaporn Soonthorn

(Miss Sudaporn Soonthorn)

Analyst

Naris Poonwasupetch

(Miss Narisa Poonwasupetch)

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. ^{1/} At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.4. ^{2/} Notification of the Ministry of Natural Resources and Environment, B.E.2557.5. ^{3/} The assigned value in EIA report, B.E.2565.

6. - No Standard.



บริษัท ซีคอต จำกัด
SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต แขวงบางซื่อ เขตบางซื่อ กรุงเทพฯ 10800
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TEL : +66(0) 2959-3600 FAX : +66(0) 2959-3535 E-mail : envserv@secot.co.th

STACK EMISSION ANALYSIS REPORT

CLIENT NAME : BST ENFOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEK)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 18/09/2022
RECEIVED DATE : 19/09/2022 ANALYTICAL DATE : 19/09/2022
REPORT DATE : 29/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase 2 OPERATOR : Mr. Pisanu Seemampang
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

STACK DESCRIPTION

Height : 45.0 m Gas Velocity : 4.0 m/s
Diameter : 1.8 m Flow rate¹⁾ : 495 Nm³/min
Temperature : 74.8 °C Excess Oxygen : 20.8 %
Moisture : 4.6 %

PARAMETER	UNIT	ND (Non-detectable)	RESULT ¹⁾ 20.8%O ₂	STANDARD Concentration	REFERENCE Emission (g/s)	METHOD
Oxide of Nitrogen	ppm	< 1.00	ND	4.4 ³⁾	0.24 ³⁾	US EPA Method 7
	mg/m ³	< 2.00	ND			

Phatchara Samanchan

(Miss Phatchara Samanchan)

Analyst

REG. NO. 3-239-A-8183

Nirisa Poowasanpetch

(Miss Nirisa Poowasanpetch)

Technical Management Team

REG. NO. 3-239-A-6419

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

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

3. ¹⁾ At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. ²⁾ Notification of the Ministry of Natural Resource and Environment, B.E.2557.

5. ³⁾ The assigned value in EIA report, B.E.2565.

6. - No Standard.



บริษัท ซีคอต จำกัด
SECOT CO., LTD.

239 ถนนวิภาวดีรังสิต 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 : BST ENFOS ELASTOMER Co., Ltd. REFERENCE NO. : 222028MON2H-Sik
(BEK)
SAMPLING BY : SECOT Co., Ltd. SAMPLING DATE : 18/09/2022
RECEIVED DATE : 19/09/2022 ANALYTICAL DATE : 19, 21-22/09/2022
REPORT DATE : 29/09/2022 SAMPLE CONDITION : Normal
STACK LOCATION : RTO Phase 2 OPERATOR : Mr. Pisanu Seemampang
SOURCE DESCRIPTION : Combustion FUEL TYPE : Natural Gas

Height : 45.0 m Gas Velocity : 4.0 m/s
Diameter : 1.8 m Flow rate¹⁾ : 495 Nm³/min
Temperature : 74.8 °C Excess Oxygen : 20.8 %
Moisture : 4.6 %

PARAMETER	UNIT	ND (Non-detectable)	RESULT ¹⁾ 20.8%O ₂	STANDARD Concentration	REFERENCE Emission (g/s)	METHOD
1,3-Butadiene	ppm	< 0.01	ND	2 ³⁾ , 0.1 ³⁾	0.006 ³⁾	US EPA Method 18
	mg/m ³	< 0.04	ND			
Total Hydrocarbon	ppm	< 0.10	9.94	0.1480	-	Flame Ionization Detection
	mg/m ³	< 0.18	17.93			
Tetrahydrofuran	ppm	< 0.01	ND	1.5 ³⁾	0.129 ³⁾	US EPA Method 18
	mg/m ³	< 0.04	ND			
Cyclohexane	ppm	< 0.01	0.17	14.5 ³⁾	1.698 ³⁾	US EPA Method 18
	mg/m ³	< 0.04	0.59			
n-Heptane	ppm	< 0.01	0.07	14.5 ³⁾	0.179 ³⁾	US EPA Method 18
	mg/m ³	< 0.04	0.29			
Styrene	ppm	< 0.01	ND	1 ³⁾	0.124 ³⁾	US EPA Method 18
	mg/m ³	< 0.04	ND			
Toluene	ppm	< 0.01	0.05	1 ³⁾	0.11 ³⁾	US EPA Method 18
	mg/m ³	< 0.04	0.19			

Sudaporn Seenthorn

(Miss Sudaporn Seenthorn)

Analyst

Nirisa Poowasanpetch

(Miss Nirisa 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. ¹⁾ At standard pressure of 760 mmHg and temperature of 25 °C, dry basis.

4. ²⁾ Notification of the Ministry of Natural Resource and Environment, B.E.2557.

5. ³⁾ The assigned value in EIA report, B.E.2565.

6. - No Standard.

ภาคผนวก ง.2-2

ผลการตรวจวัดความเร็วและทิศทางลม



Meteorological Monitoring Results : Wind Rose MTR-BEE

Location : Ban Pong

Monitor period : 03-10 Sep 2022

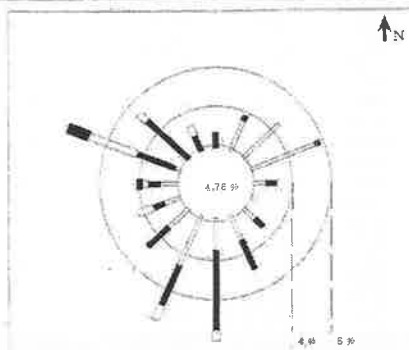
Wind Speed Model : NRG Symphonic

Serial No : A5088

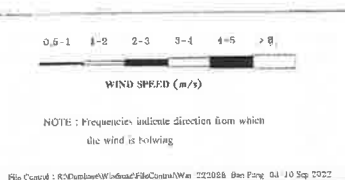
Wind Direction Model : NRG Symphonic

Serial No : A5088

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	
N	0.0000	0.0000	0.0179	0.0000	0.0000	0.0000	0.0179
NNE	0.0000	0.0357	0.0060	0.0000	0.0000	0.0000	0.0417
NE	0.0000	0.0536	0.0000	0.0000	0.0000	0.0000	0.0536
ENE	0.0000	0.0714	0.0060	0.0000	0.0000	0.0000	0.0774
E	0.0000	0.0119	0.0119	0.0000	0.0000	0.0000	0.0238
ESE	0.0000	0.0060	0.0000	0.0000	0.0000	0.0000	0.0060
SE	0.0000	0.0119	0.0119	0.0000	0.0000	0.0000	0.0238
SSE	0.0000	0.0298	0.0357	0.0000	0.0000	0.0000	0.0655
S	0.0000	0.0357	0.0893	0.0119	0.0000	0.0000	0.1369
SSW	0.0000	0.0595	0.0476	0.0179	0.0000	0.0000	0.1250
SW	0.0000	0.0298	0.0298	0.0000	0.0000	0.0000	0.0595
WSW	0.0000	0.0179	0.0119	0.0179	0.0000	0.0000	0.0476
W	0.0000	0.0179	0.0119	0.0060	0.0000	0.0000	0.0417
WNW	0.0000	0.0060	0.0417	0.0536	0.0238	0.0000	0.1250
NW	0.0000	0.0000	0.0595	0.0119	0.0000	0.0000	0.0714
NNW	0.0000	0.0000	0.0179	0.0119	0.0000	0.0000	0.0298
CALM				0.0476			



Application : WindPro Ver.1.0
Control : 16 Direction Calculation With
Calm Wind < 0.5 m/s
Data Unit : Direction in Deg.
Wind Speed in m/s



(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Sonjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-BEE

Location : Ban Pong

Monitor period : 03-10 Sep 2022

Wind Speed Model : NRG Symphonic

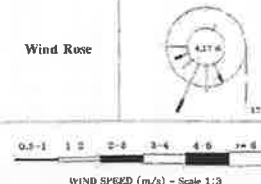
Serial No : A5088

Wind Direction Model : NRG Symphonic

Serial No : A5088

Time	03-04 Sep 2022		04-05 Sep 2022		05-06 Sep 2022		06-07 Sep 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
15:00 - 16:00	1.0	S	2.0	SW	2.0	SSW	2.0	SW
16:00 - 17:00	1.0	SSW	2.0	SW	2.0	SSW	2.0	SSW
17:00 - 18:00	1.0	W	1.0	SW	2.0	S	1.0	S
18:00 - 19:00	1.0	SSW	1.0	SW	1.0	SE	2.0	SW
19:00 - 20:00	1.0	SSW	1.0	WSW	1.0	SSW	3.0	WSW
20:00 - 21:00	1.0	SSW	2.0	WNW	2.0	SSW	3.0	W
21:00 - 22:00	1.0	SSW	1.0	WNW	1.0	SE	3.0	WNW
22:00 - 23:00	1.0	SSW	2.0	S	1.0	ENE	4.0	WNW
23:00 - 24:00	2.0	SSW	1.0	NNE	1.0	ENE	3.0	WNW
00:00 - 01:00	2.0	SSW	1.0	SSW	1.0	ENE	2.0	NW
01:00 - 02:00	2.0	WSW	0.0	NE	1.0	ENE	2.0	N
02:00 - 03:00	1.0	W	0.0	NNE	1.0	NE	2.0	SSE
03:00 - 04:00	1.0	W	0.0	ENE	1.0	NE	2.0	WNW
04:00 - 05:00	1.0	SW	0.0	ENE	1.0	ENE	1.0	WSW
05:00 - 06:00	1.0	NNE	0.0	E	1.0	ENE	2.0	WNW
06:00 - 07:00	1.0	S	0.0	E	1.0	ENE	3.0	WNW
07:00 - 08:00	2.0	SSE	0.0	NE	1.0	ENE	3.0	WNW
08:00 - 09:00	1.0	S	1.0	SSE	1.0	ENE	3.0	NNW
09:00 - 10:00	0.0	SSW	2.0	S	1.0	E	2.0	S
10:00 - 11:00	1.0	S	2.0	S	2.0	SE	2.0	SSE
11:00 - 12:00	1.0	SSE	3.0	S	2.0	SSE	2.0	NW
12:00 - 13:00	1.0	SSE	3.0	S	2.0	S	2.0	WNW
13:00 - 14:00	1.0	WSW	3.0	SSW	2.0	S	3.0	WNW
14:00 - 15:00	1.0	SW	3.0	SSW	1.0	SW	3.0	WNW

Wind Rose



(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Sonjai)
Technical Management Team

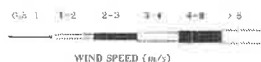


Meteorological Monitoring Results : Wind Rose MTR-BEE

Location : Soi Ruam Patana
Wind Speed Model : NRG Symphonie
Wind Direction Model : NRG Symphonie
Monitor period : 03-10 Sep 2022
Serial No : A4902
Serial No : A4902

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	
N	0.0000	0.0060	0.0357	0.0060	0.0000	0.0000	0.0476
NNE	0.0060	0.0060	0.0119	0.0119	0.0000	0.0000	0.0357
NE	0.0119	0.0119	0.0476	0.0000	0.0000	0.0000	0.0714
ENE	0.0000	0.0119	0.0476	0.0060	0.0000	0.0000	0.0655
E	0.0000	0.0060	0.0119	0.0000	0.0000	0.0000	0.0179
ESE	0.0000	0.0179	0.0119	0.0357	0.0000	0.0000	0.0655
SE	0.0060	0.0119	0.0357	0.0060	0.0000	0.0000	0.0595
SSE	0.0000	0.0179	0.0238	0.0417	0.0000	0.0000	0.0833
S	0.0060	0.0238	0.0179	0.0238	0.0119	0.0000	0.0833
SSW	0.0119	0.0238	0.0119	0.0238	0.0000	0.0000	0.0714
SW	0.0000	0.0238	0.0179	0.0357	0.0119	0.0000	0.0893
WSW	0.0000	0.0238	0.0417	0.0417	0.0000	0.0000	0.1071
W	0.0000	0.0000	0.0238	0.0119	0.0060	0.0000	0.0417
WNW	0.0000	0.0060	0.0179	0.0179	0.0000	0.0000	0.0417
NW	0.0000	0.0119	0.0238	0.0417	0.0000	0.0000	0.0833
NNW	0.0000	0.0000	0.0179	0.0179	0.0000	0.0000	0.0357
CALM							0.0000

Application : WindPro Ver.1.0
Control : 16 Direction Calculation With
Calm Wind < 0.5 m/s
Data Unit : Direction in Deg.
Wind Speed in m/s



NOTE : Frequencies indicate direction from which the wind is blowing

File Control : P:\Data\Wind\WindRose\WindRose\220720 - Soi Ruam Patana 02 - 10 Sep 2022

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team

SHCUTCO, LTD
825/255 (Srinakharinwirot Rd.)
Bangkok, Bangkok 10000
Tel: 02-255 3000 Fax: 02-255 3000



Meteorological Monitoring Results : Wind Rose MTR-BEE

Location : Soi Ruam Patana
Wind Speed Model : NRG Symphonie
Wind Direction Model : NRG Symphonie
Monitor period : 03-10 Sep 2022
Serial No : A4902
Serial No : A4902

Time	03-04 Sep 2022		04-05 Sep 2022		05-06 Sep 2022		06-07 Sep 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
15:00 - 16:00	1.8	SSE	1.3	S	3.0	S	2.5	SE
16:00 - 17:00	2.2	S	1.3	SSE	2.1	SW	3.5	ESE
17:00 - 18:00	2.2	SE	1.8	SSW	2.1	ESE	2.2	SSE
18:00 - 19:00	2.7	SSE	1.3	ESE	2.0	E	1.6	SW
19:00 - 20:00	1.5	WSW	1.4	SE	2.6	W	3.4	SW
20:00 - 21:00	1.5	SSW	1.3	WSW	2.1	SE	3.0	WSW
21:00 - 22:00	0.8	SE	1.9	SW	2.2	NE	3.4	WSW
22:00 - 23:00	0.6	SSW	2.4	NW	2.0	ENE	3.3	NNW
23:00 - 24:00	0.5	SSW	2.1	NNW	1.8	ENE	3.7	NW
00:00 - 01:00	0.6	S	2.6	WNW	2.1	NE	3.1	NW
01:00 - 02:00	0.5	NNE	1.8	S	2.2	N	3.7	ENE
02:00 - 03:00	1.5	SSW	1.8	SSW	2.4	ENE	3.1	N
03:00 - 04:00	1.9	SE	1.8	ESE	2.4	NE	2.3	SSW
04:00 - 05:00	1.8	S	1.7	NW	2.4	ENE	3.2	WNW
05:00 - 06:00	1.9	ESE	2.1	WSW	2.6	NE	3.1	S
06:00 - 07:00	1.6	S	2.3	NW	2.8	ENE	4.1	W
07:00 - 08:00	2.2	SE	2.2	WSW	2.8	ENE	4.1	SW
08:00 - 09:00	1.9	SSE	2.8	S	3.2	NNE	3.2	NW
09:00 - 10:00	1.6	SW	3.3	SSE	3.2	SSE	3.6	NW
10:00 - 11:00	1.3	WSW	3.6	ESE	3.6	SSE	3.3	NW
11:00 - 12:00	2.1	SW	3.0	SSE	4.0	S	3.4	WNW
12:00 - 13:00	2.6	SSE	3.9	ESE	3.7	ESE	3.9	SSW
13:00 - 14:00	2.3	SSE	3.5	SSE	3.5	ESE	4.2	SW
14:00 - 15:00	1.7	SW	3.5	WSW	3.0	W	4.0	S

Wind Rose



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

File Control : P:\Data\Wind\WindRose\WindRose\220720 - Soi Ruam Patana 02 - 10 Sep 2022

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team

SHCUTCO, LTD
825/255 (Srinakharinwirot Rd.)
Bangkok, Bangkok 10000
Tel: 02-255 3000 Fax: 02-255 3000



Meteorological Monitoring Results : Wind Rose MTR-BEE

Location : Soi Ruam Pattana
Wind Speed Model : NRG Symphonic
Wind Direction Model : NRG Symphonic
Monitor period : 03-10 Sep 2022
Serial No : A4902
Serial No : A4902

Time	07-08 Sep 2022		08-09 Sep 2022		09-10 Sep 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
15:00 - 16:00	3.5	WSW	3.4	S	3.7	SE
16:00 - 17:00	2.7	SSW	3.1	SW	3.7	ESSE
17:00 - 18:00	2.9	WSW	3.2	NW	2.8	WSW
18:00 - 19:00	2.9	N	3.4	NW	2.3	WSW
19:00 - 20:00	2.9	NNE	2.7	N	2.3	ESE
20:00 - 21:00	2.3	W	2.5	N	2.2	SE
21:00 - 22:00	3.4	SSW	1.8	NE	2.3	SE
22:00 - 23:00	3.6	W	2.0	ENE	2.7	S
23:00 - 24:00	3.6	NNW	1.9	NE	3.2	SSE
00:00 - 01:00	3.1	WNW	2.1	ENE	3.1	WSW
01:00 - 02:00	2.2	NW	2.3	NE	3.4	SSW
02:00 - 03:00	2.2	NE	1.6	ENE	2.4	W
03:00 - 04:00	2.3	NNE	0.9	NE	2.2	N
04:00 - 05:00	2.3	N	1.1	E	2.2	E
05:00 - 06:00	1.9	NW	0.8	NE	2.6	NE
06:00 - 07:00	1.8	N	1.5	NNE	3.2	NNE
07:00 - 08:00	1.8	WNW	1.7	WSW	2.3	NE
08:00 - 09:00	3.7	SW	2.4	W	2.5	NNW
09:00 - 10:00	3.5	SW	2.3	WSW	2.5	WNW
10:00 - 11:00	3.8	SW	2.9	WSW	2.5	NW
11:00 - 12:00	3.6	SSW	2.3	SW	2.6	WNW
12:00 - 13:00	3.7	SW	2.3	NNW	3.7	NNW
13:00 - 14:00	3.2	WSW	2.5	NW	3.4	S
14:00 - 15:00	3.7	WSW	2.4	ENE	3.4	SSE

Wind Rose



File Control: R:\Monitoring\Wind\WindPro\WindPro-122022-Wat Map Chaloed 03-10 Sep 2022

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

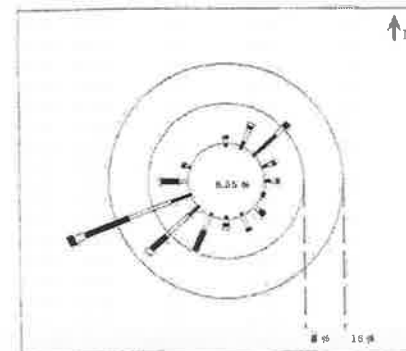
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-BEE

Location : Wat Map Chaloed
Wind Speed Model : NRG Symphonic
Wind Direction Model : NRG Symphonic
Monitor period : 03-10 Sep 2022
Serial No : A5086
Serial No : A5086

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	
N	0.0060	0.0119	0.0060	0.0000	0.0000	0.0000	0.0238
NNE	0.0179	0.0298	0.0060	0.0000	0.0000	0.0000	0.0595
NE	0.0655	0.0238	0.0119	0.0000	0.0000	0.0000	0.1012
ENE	0.0119	0.0119	0.0060	0.0000	0.0000	0.0000	0.0298
E	0.0119	0.0119	0.0060	0.0000	0.0000	0.0000	0.0298
ESE	0.0000	0.0000	0.0060	0.0000	0.0000	0.0000	0.0060
SE	0.0000	0.0179	0.0119	0.0000	0.0000	0.0000	0.0298
SSE	0.0060	0.0298	0.0060	0.0000	0.0000	0.0000	0.0417
S	0.0060	0.0119	0.0060	0.0000	0.0000	0.0000	0.0298
SSW	0.0060	0.0357	0.0476	0.0000	0.0000	0.0000	0.0893
SW	0.0298	0.0655	0.0417	0.0119	0.0000	0.0000	0.1468
WSW	0.0417	0.0952	0.0952	0.0238	0.0119	0.0000	0.2679
W	0.0000	0.0179	0.0357	0.0000	0.0000	0.0000	0.0595
WNW	0.0060	0.0060	0.0060	0.0000	0.0000	0.0000	0.0179
NW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NNW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CALM	0.0655						



Application : WindPro Ver.1.0
Control : 16 Direction Calculation With
Calm Wind < 0.5 m/s
Data Unit : Direction in Deg.
Wind Speed in m/s



NOTE : Frequencies indicate direction from which the wind is blowing

File Control: R:\Monitoring\Wind\WindPro\WindPro-122022-Wat Map Chaloed 03-10 Sep 2022

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team

Location : Wat Map Chalokul

Monitor period : 03-10 Sep 2022

Wind Speed Model : NRG Symphonic

Serial No : A5086

Wind Direction Model : NRC Symphonie

Serial No : A5086

Wind Rose

Fig. 3. Critical RAD and Log Windows Min/Max/Win = 22/20/28 = 2%. Max. Cl. Fail. 05/11/11. See 26/2

(Miss Katesarin Vorradeiwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

Location : Wat Map Chalood

Monitor period : 08-10 Sep 2022

Wind Speed Model : NRG Symphonie

Serial No : A5086

Wind Direction Model : NRG Symphonic

Serial No : A5086

Wind Rose

0.5-1 1-2 2-3 3-4 4-6

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

File Control: H:\Nantes\Wieder\Files\orig\NW-222023 - Was Mo. Deleted 04.10.14 - open

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Sornjai)
Technical Management Team

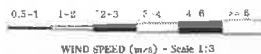


Meteorological Monitoring Results : Wind Rose MTR-BEE

Location : Ban Pong
Wind Speed Model : NRG Symphonie
Wind Direction Model : NRG Symphonie
Monitor period : 03-10 Sep 2022
Serial No : A5088
Serial No : A5088

Time	07-08 Sep 2022		08-09 Sep 2022		09-10 Sep 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
15:00 - 16:00	2.0	NW	2.0	WNW	2.0	E
16:00 - 17:00	2.0	NW	2.0	WNW	3.0	SSW
17:00 - 18:00	2.0	WNW	2.0	NW	2.0	WSW
18:00 - 19:00	2.0	S	2.0	NW	2.0	SW
19:00 - 20:00	1.0	NE	2.0	NW	2.0	SSW
20:00 - 21:00	1.0	SSE	3.0	NNW	2.0	S
21:00 - 22:00	2.0	S	2.0	NNE	2.0	S
22:00 - 23:00	3.0	WNW	1.0	NE	2.0	S
23:00 - 24:00	3.0	WNW	1.0	NE	2.0	S
00:00 - 01:00	3.0	NW	1.0	ENE	2.0	SSW
01:00 - 02:00	2.0	NNW	1.0	ENE	3.0	WSW
02:00 - 03:00	2.0	N	1.0	ENE	2.0	NW
03:00 - 04:00	1.0	NNE	1.0	NE	2.0	N
04:00 - 05:00	1.0	SSW	1.0	NE	1.0	NNE
05:00 - 06:00	1.0	SSW	1.0	ENE	1.0	NNE
06:00 - 07:00	1.0	S	1.0	E	1.0	NE
07:00 - 08:00	1.0	SE	1.0	SSE	1.0	NE
08:00 - 09:00	2.0	NW	2.0	SSE	2.0	SSE
09:00 - 10:00	3.0	NW	2.0	W	2.0	SE
10:00 - 11:00	4.0	WNW	3.0	WSW	2.0	NNW
11:00 - 12:00	4.0	WNW	2.0	W	2.0	NNW
12:00 - 13:00	4.0	W	2.0	NW	2.0	S
13:00 - 14:00	4.0	WNW	2.0	S	2.0	E
14:00 - 15:00	3.0	WNW	1.0	NNE	2.0	ENE

Wind Rose



File Content: \\Thailand\\Work\\P\\M\\Wind\\Win-222044-Ban Pong 08-10 Sep 2022

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

Preeda S.

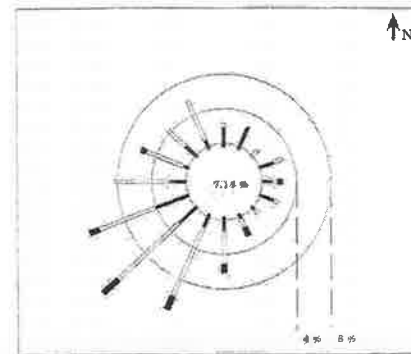
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-BEE

Location : Ban Pong
Wind Speed Model : NRG Symphonie
Wind Direction Model : NRG Symphonie
Monitor period : 11-18 Sep 2022
Serial No : A5088
Serial No : A5088

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-5 m/s	More than 5	
N	0.0238	0.0060	0.0000	0.0000	0.0000	0.0000	0.0298
NNE	0.0298	0.0000	0.0000	0.0000	0.0000	0.0000	0.0298
NE	0.0000	0.0119	0.0000	0.0000	0.0000	0.0000	0.0119
ENE	0.0179	0.0119	0.0000	0.0000	0.0000	0.0000	0.0298
E	0.0119	0.0060	0.0060	0.0000	0.0000	0.0000	0.0238
ESE	0.0179	0.0060	0.0000	0.0000	0.0000	0.0000	0.0238
SE	0.0060	0.0060	0.0000	0.0000	0.0000	0.0000	0.0119
SSE	0.0060	0.0119	0.0119	0.0000	0.0000	0.0000	0.0298
S	0.0179	0.0417	0.0119	0.0000	0.0000	0.0000	0.0714
SSW	0.0179	0.0952	0.0179	0.0000	0.0000	0.0000	0.1310
SW	0.0298	0.1012	0.0238	0.0000	0.0000	0.0000	0.1548
WSW	0.0417	0.0714	0.0119	0.0000	0.0000	0.0000	0.1250
W	0.0179	0.0655	0.0000	0.0000	0.0000	0.0000	0.0833
WNW	0.0060	0.0476	0.0060	0.0000	0.0000	0.0000	0.0595
NW	0.0179	0.0298	0.0000	0.0000	0.0000	0.0000	0.0476
NNW	0.0119	0.0536	0.0000	0.0000	0.0000	0.0000	0.0655
CALM				0.0714			



Application : WindPro Ver.1.0
Control : 16 Direction Calculation With
Calon Wind < 0.5 m/s
Data Unit : Direction in Deg.
Wind Speed in m/s



File Content: \\Thailand\\Work\\P\\M\\Wind\\Win-222044-Ban Pong 11-18 Sep 2022

(Miss Katesarin Vorradetwittaya)

Environmental Scientist

Preeda S.

(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-BEE

Location : Ban Pong
Wind Speed Model : NRG Symphonic
Wind Direction Model : NRG Symphonic
Monitor period : 11-18 Sep 2022
Serial No : A5088
Serial No : A5088

Time	11-12 Sep 2022		12-13 Sep 2022		13-14 Sep 2022		14-15 Sep 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
07:00 - 08:00	0.7	NW	0.9	NNE	1.3	WNW	1.1	ENE
08:00 - 09:00	1.4	WNW	1.0	NNW	1.0	NNW	0.9	SW
09:00 - 10:00	0.9	NW	1.0	NNW	1.1	SW	0.9	WSW
10:00 - 11:00	1.1	NNW	1.0	WNW	0.8	W	1.5	SW
11:00 - 12:00	1.2	W	1.2	WSW	1.3	S	2.3	SSE
12:00 - 13:00	1.5	NNW	1.8	W	1.7	NNW	2.4	WSW
13:00 - 14:00	1.4	W	1.5	SSW	1.2	NE	2.3	S
14:00 - 15:00	1.7	NW	1.5	NW	0.9	N	2.1	E
15:00 - 16:00	1.7	N	0.8	NNE	0.7	NNW	2.2	SSE
16:00 - 17:00	1.5	WSW	0.5	E	0.5	ESE	1.5	SE
17:00 - 18:00	1.0	SW	0.2	NW	0.6	NW	1.3	S
18:00 - 19:00	0.8	S	0.3	E	0.6	ENE	1.1	W
19:00 - 20:00	0.7	WSW	0.1	NNE	0.5	ENE	1.1	SW
20:00 - 21:00	0.4	SW	0.1	NE	0.6	N	0.7	ESE
21:00 - 22:00	0.6	ESE	0.1	NNE	0.5	S	1.3	SSE
22:00 - 23:00	0.8	N	0.1	NW	0.5	E	1.7	ESE
23:00 - 24:00	1.6	SW	0.1	WNW	0.5	ENE	1.8	SSE
00:00 - 01:00	0.4	WSW	0.4	E	0.7	WNW	1.6	SW
01:00 - 02:00	0.6	S	1.3	WNW	0.7	N	1.2	WNW
02:00 - 03:00	0.5	WSW	1.3	W	1.0	NE	0.9	SW
03:00 - 04:00	0.4	SSW	1.4	ENE	1.2	WNW	0.9	NNW
04:00 - 05:00	0.4	W	1.7	NW	1.2	NW	1.3	NNW
05:00 - 06:00	0.5	NNE	1.5	E	1.2	SSW	1.4	NNW
06:00 - 07:00	0.8	NNE	1.5	NNW	0.7	NNE	1.5	NW

Wind Rose



0.5-1 1-2 2-3 3-4 4-5 5-6
WIND SPEED (m/s) - Scale 1:3

File: C:\Users\Katesarin\Documents\Windrose\220208-Ban Pong 11-18 Sep 2022

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

SHG/ETD/LTD
250 Ratchabongkarn Rd.
Bangkok, Bangkok 10600
Tel: 02-012345 3800 Fax: 02-012345 3800

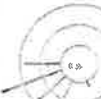


Meteorological Monitoring Results : Wind Rose MTR-BEE

Location : Ban Pong
Wind Speed Model : NRG Symphonic
Wind Direction Model : NRG Symphonic
Monitor period : 11-18 Sep 2022
Serial No : A5088
Serial No : A5088

Time	13-16 Sep 2022		16-17 Sep 2022		17-18 Sep 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
07:00 - 08:00	1.6	SW	1.8	SSW	1.9	SSW
08:00 - 09:00	1.8	WSW	1.9	SW	1.9	SW
09:00 - 10:00	1.8	WSW	1.6	SSW	1.7	WSW
10:00 - 11:00	2.1	SW	1.8	WSW	2.1	S
11:00 - 12:00	1.4	W	1.9	W	2.0	SSW
12:00 - 13:00	1.1	SSW	2.4	SW	1.5	SSW
13:00 - 14:00	1.5	SW	2.2	WSW	1.6	SW
14:00 - 15:00	2.2	SSW	1.7	WSW	1.3	SSW
15:00 - 16:00	2.1	SSW	1.4	W	1.4	S
16:00 - 17:00	1.6	WSW	1.0	W	1.5	SW
17:00 - 18:00	1.2	S	0.7	W	1.9	W
18:00 - 19:00	1.0	SSW	0.6	W	1.8	SSW
19:00 - 20:00	0.7	SE	0.6	WSW	1.4	SSW
20:00 - 21:00	0.5	SW	0.7	SSE	0.9	SSW
21:00 - 22:00	0.7	SSW	1.6	WSW	1.3	S
22:00 - 23:00	0.7	SW	0.7	WSW	1.5	SW
23:00 - 24:00	0.8	WSW	0.6	WSW	1.3	SSW
00:00 - 01:00	1.1	WNW	1.2	SW	1.2	SSW
01:00 - 02:00	1.6	WNW	1.7	SSW	1.2	S
02:00 - 03:00	2.2	WNW	1.9	SW	1.1	SSW
03:00 - 04:00	2.3	SW	1.7	WSW	1.0	SSW
04:00 - 05:00	2.2	SW	1.6	WSW	1.2	SW
05:00 - 06:00	1.9	WSW	1.6	SW	0.9	SSW
06:00 - 07:00	1.7	S	0.8	SW	1.3	W

Wind Rose



0.5-1 1-2 2-3 3-4 4-5 5-6
WIND SPEED (m/s) - Scale 1:3

File: C:\Users\Katesarin\Documents\Windrose\220208-Ban Pong 11-18 Sep 2022

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

SHG/ETD/LTD
250 Ratchabongkarn Rd.
Bangkok, Bangkok 10600
Tel: 02-012345 3800 Fax: 02-012345 3800



Meteorological Monitoring Results : Wind Rose MTR-BEE

Location : Soi Ruam Pattana

Monitor period : 11-18 Sep 2022

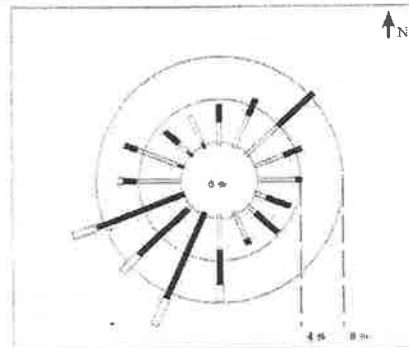
Wind Speed Model : NRG Symphonic

Serial No : A4902

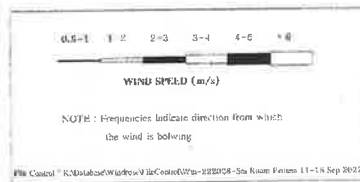
Wind Direction Model : NRG Symphonic

Serial No : A4902

Direction	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.5-1 m/s	1-2 m/s	2-3 m/s	3-4 m/s	4-6 m/s	More than 6	
N	0.0000	0.0238	0.0179	0.0000	0.0000	0.0000	0.0417
NNE	0.0000	0.0357	0.0179	0.0000	0.0000	0.0000	0.0536
NE	0.0000	0.0417	0.0476	0.0000	0.0000	0.0000	0.0893
ENE	0.0000	0.0296	0.0179	0.0000	0.0000	0.0000	0.0476
E	0.0000	0.0357	0.0060	0.0000	0.0000	0.0000	0.0417
ESE	0.0000	0.0119	0.0238	0.0000	0.0000	0.0000	0.0357
SE	0.0000	0.0119	0.0298	0.0000	0.0000	0.0000	0.0417
SSE	0.0000	0.0298	0.0060	0.0000	0.0000	0.0000	0.0357
S	0.0000	0.0357	0.0357	0.0179	0.0000	0.0000	0.0893
SSW	0.0000	0.0000	0.0952	0.0238	0.0000	0.0000	0.1250
SW	0.0000	0.0060	0.0655	0.0238	0.0000	0.0000	0.0952
WSW	0.0000	0.0000	0.0893	0.0238	0.0000	0.0000	0.1131
W	0.0000	0.0417	0.0119	0.0060	0.0000	0.0000	0.0595
WNW	0.0060	0.0417	0.0119	0.0000	0.0000	0.0000	0.0595
NW	0.0060	0.0119	0.0179	0.0000	0.0000	0.0000	0.0357
NNW	0.0060	0.0298	0.0000	0.0000	0.0000	0.0000	0.0357
CALM	0.0000						



Application : WindPro Ver.1.0
Control : 16 Direction Calculation With
Calm Wind < 0.5 m/s
Data Unit : Direction in Deg.
Wind Speed in m/s



File Control : K:\Data\WinMTR\WinMTR\2022\11-18 Sep 2022

(Miss Katesar o Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose MTR-BEE

Location : Soi Ruam Pattana

Monitor period : 11-18 Sep 2022

Wind Speed Model : NRG Symphonic

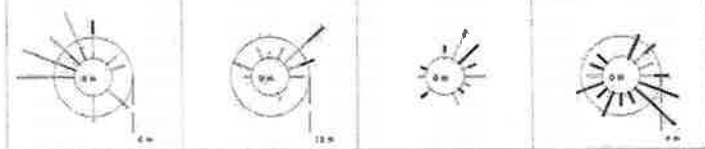
Serial No : A4902

Wind Direction Model : NRG Symphonic

Serial No : A4902

Time	11-12 Sep 2022		12-13 Sep 2022		13-14 Sep 2022		14-15 Sep 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
07:00 - 08:00	1.7	ENE	1.2	N	2.0	NE	1.8	NE
08:00 - 09:00	1.9	WNW	1.4	NE	1.4	SW	2.2	SSE
09:00 - 10:00	1.9	N	1.5	NNW	1.8	W	2.1	SSW
10:00 - 11:00	2.0	N	1.1	W	2.1	SW	2.2	SSW
11:00 - 12:00	1.7	N	1.2	SSE	2.2	WNW	2.4	SW
12:00 - 13:00	1.6	NNW	1.5	WNW	1.6	NNE	1.9	ENE
13:00 - 14:00	1.3	WNW	1.5	WNW	1.8	N	2.5	NE
14:00 - 15:00	1.1	W	1.9	NNW	1.5	NNE	2.0	ESE
15:00 - 16:00	1.0	WNW	1.3	NE	1.5	ENE	2.7	SE
16:00 - 17:00	0.9	WNW	1.8	NE	1.5	ESE	2.4	S
17:00 - 18:00	0.8	NW	1.2	NE	1.4	SSE	2.7	SE
18:00 - 19:00	1.1	NW	1.4	E	1.7	NNE	2.5	WSW
19:00 - 20:00	1.2	NNW	1.4	E	1.7	E	2.0	ESE
20:00 - 21:00	1.0	SE	1.3	ENE	1.5	E	2.3	SE
21:00 - 22:00	1.3	W	1.5	NNE	1.5	E	2.1	SE
22:00 - 23:00	1.0	W	1.5	WNW	1.5	NNE	2.4	ESE
23:00 - 24:00	1.5	S	1.4	ENE	1.7	SSE	2.5	E
00:00 - 01:00	1.3	S	1.8	NE	2.1	SE	2.2	NNE
01:00 - 02:00	1.4	NW	2.0	NE	2.0	NE	2.1	NNE
02:00 - 03:00	0.9	NNW	2.3	ENE	2.2	NE	1.9	E
03:00 - 04:00	1.6	W	1.8	NNE	2.5	NE	2.3	WSW
04:00 - 05:00	1.5	NNW	2.5	NE	2.1	N	3.0	W
05:00 - 06:00	1.3	SE	2.4	ENE	2.0	NNE	2.7	NW
06:00 - 07:00	1.4	NE	2.3	NE	2.0	ENE	2.7	WNW

Wind Rose



File Control : K:\Data\WinMTR\WinMTR\2022\11-18 Sep 2022

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

Serial No : 44902

Wind Rose

File Control: K:\Milestones\W\Johnson\3-06-08 - gsc\GWSN-22797N-Sol Rm Pattern Final Set 2012

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

Freda S.

(Miss Preeda Sonjai)
Technical Management Team

Serial No : A5086

Wind Speed in m/s

NOTE : Frequencies indicate direction from which the wind is blowing.

File Name: \\Fs1\pub\W\Wen\Gao\17\Gao\msub\Wm-222026_Wm Sub Copy\4 17-18 56-2025

(Miss Katesarin Vorradeewittaya)
Environmental Scientist

Prendera

(Miss Preeda Sonjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose **MTR-BEE**

Location : Wat Map Chalood

Monitor period : 11-18 Sep 2022

Wind Speed Model : NRG Symphonic

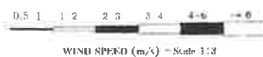
Serial No : A5086

Wind Direction Model : NRG Symphonic

Serial No : A5086

Time	11-12 Sep 2022		12-13 Sep 2022		13-14 Sep 2022		14-15 Sep 2022	
	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD	WS(m/s)	WD
07:00 - 08:00	1.1	NW	1.4	NNW	1.1	W	1.0	NW
08:00 - 09:00	1.5	WNW	1.7	NW	1.6	NNW	0.9	SW
09:00 - 10:00	1.6	W	1.7	NNW	1.4	SW	1.0	WSW
10:00 - 11:00	1.8	W	1.9	NW	1.4	SSW	1.2	W
11:00 - 12:00	2.0	WNW	1.9	WNW	1.4	NNW	2.0	WNW
12:00 - 13:00	2.4	WNW	1.7	WNW	1.3	E	1.8	NNW
13:00 - 14:00	2.5	NNW	2.1	WNW	0.9	W	1.5	E
14:00 - 15:00	2.8	NNW	1.3	NW	0.6	NW	1.4	W
15:00 - 16:00	2.8	NNW	1.0	SW	0.6	E	1.6	S
16:00 - 17:00	2.7	W	0.9	WNW	0.4	ESE	1.4	SSW
17:00 - 18:00	1.8	NW	0.2	WNW	0.3	ENE	1.6	SSW
18:00 - 19:00	1.0	N	0.3	NNW	0.6	WNW	1.3	SSW
19:00 - 20:00	0.9	W	0.2	NE	0.4	NE	1.0	WNW
20:00 - 21:00	0.8	SW	0.3	NE	0.4	W	0.6	NW
21:00 - 22:00	0.9	WSW	0.4	ENE	0.3	N	0.9	W
22:00 - 23:00	0.8	SW	0.2	WNW	0.5	NW	1.6	WNW
23:00 - 24:00	1.5	SW	0.1	WNW	0.6	WNW	2.0	WNW
00:00 - 01:00	0.7	N	0.5	E	0.3	SSW	1.8	W
01:00 - 02:00	0.7	W	1.3	NNW	0.4	NNE	0.9	SSE
02:00 - 03:00	0.8	SSW	1.1	W	0.9	NW	1.1	WSW
03:00 - 04:00	1.4	NW	1.4	NE	1.0	E	1.1	S
04:00 - 05:00	1.0	SW	1.6	W	1.0	N	1.6	N
05:00 - 06:00	1.0	SSW	1.4	W	0.9	SW	1.4	WSW
06:00 - 07:00	1.3	SSW	1.1	WNW	0.5	ENE	1.9	SW

Wind Rose



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

(Miss Katesarin Vorradeetwittaya)

Environmental Scientist

Preeda S.

(Miss Preeda Somjai)
Technical Management Team



Meteorological Monitoring Results : Wind Rose **MTR-BEE**

Location : Wat Map Chalood

Monitor period : 11-18 Sep 2022

Wind Speed Model : NRG Symphonic

Serial No : A5086

Wind Direction Model : NRG Symphonic

Serial No : A5086

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

Wind Rose



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

(Miss Katesarin Vorradeetwittaya)

Environmental Scientist

Preeda S.

(Miss Preeda Somjai)
Technical Management Team

ภาคผนวก ง.2-3

ผลการตรวจวัดคุณภาพอากาศในบรรยากาศ



Ambient Air Monitoring Results : Nitrogen dioxide MTR-BEE

Location : Ban Pong Monitor Period : 03-10 Sep 2022
Analyzer Model : API 200A Station No : Shelter 16
Serial No : 1645 Site Operator : Mr. Siwanon Kulawong

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

Time	NO2 Concentration (ppm)						
	03-04 Sep 2022	04-05 Sep 2022	05-06 Sep 2022	06-07 Sep 2022	07-08 Sep 2022	08-09 Sep 2022	09-10 Sep 2022
15:00 - 16:00	0.0074	0.0033	0.0062	0.0082	0.0059	0.0098	0.0083
16:00 - 17:00	0.0050	0.0027	0.0080	0.0093	0.0095	0.0098	0.0083
17:00 - 18:00	0.0160	0.0037	0.0096	0.0103	0.0090	0.0074	0.0096
18:00 - 19:00	0.0080	0.0067	0.0117	0.0107	0.0083	0.0093	0.0097
19:00 - 20:00	0.0075	0.0093	0.0130	0.0135	0.0078	0.0075	0.0086
20:00 - 21:00	0.0075	0.0122	0.0112	0.0146	0.0061	0.0079	0.0094
21:00 - 22:00	0.0046	0.0085	0.0107	0.0094	0.0067	0.0085	0.0093
22:00 - 23:00	0.0051	0.0093	0.0108	0.0084	0.0051	0.0061	0.0099
23:00 - 00:00	0.0047	0.0092	0.0100	0.0074	0.0059	0.0052	0.0100
00:00 - 01:00	0.0040	0.0056	0.0096	0.0057	0.0039	0.0036	0.0090
01:00 - 02:00	0.0039	0.0043	0.0105	0.0050	0.0039	0.0050	0.0074
02:00 - 03:00	0.0029	0.0047	0.0093	0.0027	0.0033	0.0048	0.0059
03:00 - 04:00	0.0033	0.0032	0.0084	0.0039	0.0028	0.0044	0.0038
04:00 - 05:00	0.0027	0.0029	0.0084	0.0035	0.0032	0.0041	0.0041
05:00 - 06:00	0.0037	0.0044	0.0067	0.0040	0.0021	0.0037	0.0043
06:00 - 07:00	0.0057	0.0038	0.0070	0.0048	0.0036	0.0039	0.0038
07:00 - 08:00	0.0062	0.0060	0.0067	0.0052	0.0027	0.0053	0.0040
08:00 - 09:00	0.0091	0.0050	0.0076	0.0054	0.0048	0.0082	0.0057
09:00 - 10:00	0.0073	0.0077	0.0090	0.0051	0.0045	0.0084	0.0042
10:00 - 11:00	0.0082	0.0072	0.0069	0.0036	0.0047	0.0057	0.0034
11:00 - 12:00	0.0037	0.0054	0.0048	0.0062	0.0065	0.0045	0.0034
12:00 - 13:00	0.0040	0.0044	0.0057	0.0087	0.0059	0.0050	0.0030
13:00 - 14:00	0.0037	0.0044	0.0076	0.0064	0.0083	0.0060	0.0061
14:00 - 15:00	0.0034	0.0054	0.0090	0.0058	0.0096	0.0069	0.0068
Average-24Hr*	0.0052	0.0058	0.0086	0.0068	0.0058	0.0063	0.0066
Max-1Hr	0.0081	0.0122	0.0120	0.0148	0.0096	0.0098	0.0100
Min-1Hr	0.0027	0.0027	0.0048	0.0027	0.0021	0.0036	0.0030
Standard-1Hr	0.17 ppm(320 ug/cu.m)						
Standard-24Hr	-						

Remark : * Average time between 15:00-16:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide MTR-BEE

Location : Soi Ruam Pattana Monitor Period : 03-10 Sep 2022
Analyzer Model : API 200A Station No : Shelter 19
Serial No : 096 Site Operator : Mr. Siwanon Kulawong

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

Time	NO2 Concentration (ppm)						
	03-04 Sep 2022	04-05 Sep 2022	05-06 Sep 2022	06-07 Sep 2022	07-08 Sep 2022	08-09 Sep 2022	09-10 Sep 2022
15:00 - 16:00	0.0095	0.0037	0.0052	0.0073	0.0076	0.0104	0.0083
16:00 - 17:00	0.0096	0.0042	0.0070	0.0091	0.0094	0.0088	0.0086
17:00 - 18:00	0.0072	0.0045	0.0098	0.0110	0.0096	0.0114	0.0106
18:00 - 19:00	0.0096	0.0078	0.0112	0.0117	0.0100	0.0105	0.0112
19:00 - 20:00	0.0106	0.0093	0.0128	0.0127	0.0099	0.0087	0.0111
20:00 - 21:00	0.0092	0.0101	0.0121	0.0127	0.0110	0.0113	0.0103
21:00 - 22:00	0.0067	0.0083	0.0118	0.0111	0.0075	0.0098	0.0090
22:00 - 23:00	0.0091	0.0120	0.0088	0.0074	0.0068	0.0095	0.0095
23:00 - 00:00	0.0063	0.0076	0.0117	0.0070	0.0067	0.0054	0.0061
00:00 - 01:00	0.0064	0.0058	0.0113	0.0062	0.0053	0.0042	0.0059
01:00 - 02:00	0.0065	0.0040	0.0113	0.0058	0.0056	0.0058	0.0040
02:00 - 03:00	0.0052	0.0051	0.0099	0.0051	0.0048	0.0063	0.0025
03:00 - 04:00	0.0059	0.0045	0.0108	0.0065	0.0043	0.0058	0.0029
04:00 - 05:00	0.0053	0.0044	0.0083	0.0068	0.0026	0.0073	0.0031
05:00 - 06:00	0.0069	0.0051	0.0083	0.0058	0.0042	0.0061	0.0075
06:00 - 07:00	0.0077	0.0060	0.0083	0.0078	0.0053	0.0062	0.0046
07:00 - 08:00	0.0083	0.0069	0.0072	0.0072	0.0047	0.0100	0.0062
08:00 - 09:00	0.0086	0.0072	0.0075	0.0078	0.0066	0.0105	0.0055
09:00 - 10:00	0.0096	0.0081	0.0094	0.0070	0.0080	0.0106	0.0054
10:00 - 11:00	0.0081	0.0070	0.0068	0.0049	0.0081	0.0079	0.0073
11:00 - 12:00	0.0044	0.0055	0.0045	0.0077	0.0089	0.0067	0.0059
12:00 - 13:00	0.0041	0.0046	0.0060	0.0073	0.0085	0.0056	0.0057
13:00 - 14:00	0.0043	0.0044	0.0063	0.0055	0.0115	0.0087	0.0070
14:00 - 15:00	0.0044	0.0048	0.0069	0.0086	0.0111	0.0079	0.0079
Average-24Hr*	0.0071	0.0082	0.0089	0.0078	0.0075	0.0079	0.0069
Max-1Hr	0.0108	0.0101	0.0128	0.0127	0.0115	0.0114	0.0112
Min-1Hr	0.0041	0.0037	0.0045	0.0049	0.0026	0.0042	0.0028
Standard-1Hr	0.17 ppm(320 ug/cu.m)						
Standard-24Hr	-						

Remark : * Average time between 15:00-16:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide MTR-BEE

Location : Wat Map Chalood

Monitor Period : 03-10 Sep 2022

Analyzer Model : API 200A

Station No : Mobile 10

Serial No : 1651

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E

Serial No : 587

Calibration Gas Cylinder I.D.: EB0108319

Certified Date : 13 Jan 2022

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

Expire Date : 12 Jan 2023

Time	NO2 Concentration (ppm)						
	03-04 Sep 2022	04-05 Sep 2022	05-06 Sep 2022	06-07 Sep 2022	07-08 Sep 2022	08-09 Sep 2022	09-10 Sep 2022
15:00 - 16:00	0.0059	0.0027	0.0100	0.0152	0.0081	0.0101	0.0074
16:00 - 17:00	0.0054	0.0092	0.0108	0.0158	0.0116	0.0141	0.0115
17:00 - 18:00	0.0066	0.0107	0.0162	0.0177	0.0125	0.0094	0.0120
18:00 - 19:00	0.0118	0.0090	0.0185	0.0181	0.0126	0.0115	0.0125
19:00 - 20:00	0.0113	0.0058	0.0132	0.0163	0.0088	0.0109	0.0140
20:00 - 21:00	0.0089	0.0121	0.0134	0.0122	0.0088	0.0118	
21:00 - 22:00	0.0061	0.0095	0.0134	0.0115	0.0062	0.0052	0.0083
22:00 - 23:00	0.0049	0.0032	0.0132	0.0089	0.0037	0.0050	0.0066
23:00 - 00:00	0.0039	0.0039	0.0147	0.0076	0.0030	0.0076	
00:00 - 01:00	0.0049	0.0042	0.0157	0.0081	0.0032	0.0061	0.0083
01:00 - 02:00	0.0064	0.0025	0.0167	0.0077	0.0039	0.0086	0.0051
02:00 - 03:00	0.0050	0.0051	0.0124	0.0047	0.0036	0.0073	0.0053
03:00 - 04:00	0.0044	0.0052	0.0121	0.0058	0.0040	0.0055	0.0058
04:00 - 05:00	0.0054	0.0047	0.0103	0.0071	0.0056	0.0075	0.0055
05:00 - 06:00	0.0087	0.0071	0.0113	0.0096	0.0075	0.0095	
06:00 - 07:00	0.0110	0.0093	0.0119	0.0139	0.0111	0.0158	0.0084
07:00 - 08:00	0.0110	0.0111	0.0135	0.0119	0.0078	0.0108	0.0088
08:00 - 09:00	0.0126	0.0072	0.0101	0.0071	0.0071	0.0076	0.0071
09:00 - 10:00	0.0051	0.0082	0.0071	0.0119	0.0088	0.0066	0.0055
10:00 - 11:00	0.0028	0.0090	0.0039	0.0117	0.0086	0.0064	0.0060
11:00 - 12:00	0.0030	0.0074	0.0075	0.0082	0.0100	0.0082	0.0066
12:00 - 13:00	0.0030	0.0048	0.0128	0.0107	0.0109	0.0087	0.0053
13:00 - 14:00	0.0032	0.0064	0.0110	0.0083	0.0138	0.0073	0.0076
14:00 - 15:00	0.0026	0.0084	0.0129	0.0082	0.0113	0.0059	0.0023
Average - 24Hr*	0.0065	0.0069	0.0122	0.0108	0.0080	0.0085	0.0077
Max 1Hr	0.0126	0.0121	0.0185	0.0181	0.0126	0.0158	0.0140
Min 1Hr	0.0026	0.0032	0.0039	0.0047	0.0030	0.0050	0.0023
Standard - 1Hr	0.17 ppm(320 ug/cu.m)						
Standard - 24Hr							

Remark : * Average time between 16:00-15:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide MTR-BEE

Location : Ban Pong

Monitor Period : 11-18 Sep 2022

Analyzer Model : API 200A

Station No : Shelter 16

Serial No : 1645

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : Teledyne 700E

Serial No : 587

Calibration Gas Cylinder I.D.: EB0108319

Certified Date : 13 Jan 2022

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

Expire Date : 12 Jan 2023

Time	NO2 Concentration (ppm)						
	11-12 Sep 2022	12-13 Sep 2022	13-14 Sep 2022	14-15 Sep 2022	15-16 Sep 2022	16-17 Sep 2022	17-18 Sep 2022
07:00 - 08:00	0.0037	0.0030	0.0063	0.0087	0.0044	0.0087	0.0062
08:00 - 09:00	0.0025	0.0017	0.0047	0.0057	0.0057	0.0082	0.0048
09:00 - 10:00	0.0020	0.0017	0.0057	0.0058	0.0055	0.0045	0.0055
10:00 - 11:00	0.0026	0.0048	0.0071	0.0060	0.0051	0.0055	0.0055
11:00 - 12:00	0.0043	0.0056	0.0078	0.0074	0.0059	0.0046	0.0050
12:00 - 13:00	0.0043	0.0085	0.0078	0.0080	0.0066	0.0056	0.0059
13:00 - 14:00	0.0019	0.0083	0.0107	0.0084	0.0069	0.0053	0.0059
14:00 - 15:00	0.0012	0.0081	0.0112	0.0059	0.0051	0.0044	0.0071
15:00 - 16:00	0.0020	0.0091	0.0128	0.0094	0.0080	0.0040	0.0078
16:00 - 17:00	0.0038	0.0083	0.0142	0.0071	0.0070	0.0042	0.0073
17:00 - 18:00	0.0066	0.0077	0.0148	0.0067	0.0070	0.0054	0.0075
18:00 - 19:00	0.0061	0.0084	0.0145	0.0081	0.0072	0.0059	0.0085
19:00 - 20:00	0.0076	0.0051	0.0181	0.0072	0.0065	0.0047	0.0037
20:00 - 21:00	0.0071	0.0085	0.0121	0.0070	0.0072	0.0055	0.0088
21:00 - 22:00	0.0051	0.0073	0.0118	0.0063	0.0057	0.0053	0.0040
22:00 - 23:00	0.0051	0.0085	0.0104	0.0055	0.0055	0.0100	0.0048
23:00 - 00:00	0.0049	0.0071	0.0066	0.0049	0.0045	0.0077	0.0044
00:00 - 01:00	0.0043	0.0041	0.0063	0.0060	0.0056	0.0051	0.0042
01:00 - 02:00	0.0024	0.0060	0.0075	0.0059	0.0065	0.0026	0.0040
02:00 - 03:00	0.0029	0.0072	0.0070	0.0047	0.0051	0.0039	0.0036
03:00 - 04:00	0.0017	0.0069	0.0074	0.0055	0.0060	0.0038	0.0041
04:00 - 05:00	0.0025	0.0049	0.0079	0.0082	0.0062	0.0046	0.0040
05:00 - 06:00	0.0057	0.0049	0.0059	0.0086	0.0079	0.0068	0.0050
06:00 - 07:00	0.0061	0.0089	0.0101	0.0068	0.0091	0.0071	0.0079
Average - 24Hr*	0.0040	0.0063	0.0093	0.0065	0.0081	0.0055	0.0054
Max 1Hr	0.0078	0.0093	0.0146	0.0094	0.0091	0.0100	0.0079
Min 1Hr	0.0012	0.0017	0.0047	0.0047	0.0044	0.0038	0.0036
Standard - 1Hr	0.17 ppm(320 ug/cu.m)						
Standard - 24Hr							

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide MTR-BEE

Location : Soi Ruam Pattana
Analyzer Model : API 200A
Serial No : 098
Monitor Period : 11-18 Sep 2022
Station No : Shelter 19
Site Operator : Mr. Siwanon Kulawong

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

Time	NO2 Concentration (ppm)						
	11-12 Sep 2022	12-13 Sep 2022	13-14 Sep 2022	14-15 Sep 2022	15-16 Sep 2022	16-17 Sep 2022	17-18 Sep 2022
07:00 - 08:00	0.0087	0.0045	0.0089	0.0101	0.0075	0.0090	0.0081
08:00 - 09:00	0.0073	0.0032	0.0098	0.0085	0.0088	0.0107	0.0069
09:00 - 10:00	0.0056	0.0029	0.0097	0.0080	0.0100	0.0105	0.0083
10:00 - 11:00	0.0082	0.0050	0.0079	0.0103	0.0075	0.0074	0.0061
11:00 - 12:00	0.0068	0.0052	0.0117	0.0093	0.0081	0.0071	0.0060
12:00 - 13:00	0.0065	0.0056	0.0078	0.0103	0.0106	0.0084	0.0056
13:00 - 14:00	0.0048	0.0047	0.0085	0.0075	0.0098	0.0081	0.0054
14:00 - 15:00	0.0054	0.0056	0.0117	0.0073	0.0228	0.0086	0.0072
15:00 - 16:00	0.0055	0.0083	0.0106	0.0084	0.0174	0.0084	0.0069
16:00 - 17:00	0.0076	0.0079	0.0118	0.0095	0.0162	0.0093	0.0083
17:00 - 18:00	0.0080	0.0045	0.0078	0.0043	0.0125	0.0116	0.0044
18:00 - 19:00	0.0074	0.0081	0.0078	0.0054	0.0059	0.0078	0.0032
19:00 - 20:00	0.0073	0.0082	0.0086	0.0096	0.0061	0.0056	0.0028
20:00 - 21:00	0.0070	0.0077	0.0078	0.0042	0.0058	0.0058	0.0034
21:00 - 22:00	0.0097	0.0090	0.0083	0.0082	0.0051	0.0082	0.0051
22:00 - 23:00	0.0121	0.0094	0.0085	0.0082	0.0061	0.0087	0.0041
23:00 - 00:00	0.0064	0.0084	0.0087	0.0074	0.0083	0.0101	0.0054
00:00 - 01:00	0.0076	0.0075	0.0093	0.0101	0.0092	0.0108	0.0045
01:00 - 02:00	0.0080	0.0065	0.0073	0.0087	0.0093	0.0088	0.0040
02:00 - 03:00	0.0073	0.0099	0.0085	0.0042	0.0049	0.0085	0.0049
03:00 - 04:00	0.0059	0.0096	0.0048	0.0091	0.0093	0.0074	0.0052
04:00 - 05:00	0.0052	0.0087	0.0050	0.0059	0.0076	0.0073	0.0071
05:00 - 06:00	0.0048	0.0051	0.0062	0.0084	0.0101	0.0099	0.0095
06:00 - 07:00	0.0049	0.0087	0.0100	0.0060	0.0094	0.0090	0.0071
Average-24Hr*	0.0070	0.0066	0.0085	0.0077	0.0094	0.0085	0.0057
Max-1Hr	0.0121	0.0099	0.0117	0.0108	0.0228	0.0116	0.0092
Min-1Hr	0.0048	0.0029	0.0048	0.0042	0.0049	0.0056	0.0028
Standard-1Hr	0.17 ppm(320 ug/cu.m)						
Standard-24Hr							

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Ambient Air Monitoring Results : Nitrogen dioxide MTR-BEE

Location : War Map Chalod
Analyzer Model : API 200A
Serial No : 1651
Monitor Period : 11-18 Sep 2022
Station No : Mobile 10
Site Operator : Mr. Siwanon Kulawong

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

Time	NO2 Concentration (ppm)						
	11-12 Sep 2022	12-13 Sep 2022	13-14 Sep 2022	14-15 Sep 2022	15-16 Sep 2022	16-17 Sep 2022	17-18 Sep 2022
07:00 - 08:00	0.0074	0.0048	0.0064	0.0099	0.0093	0.0087	0.0083
08:00 - 09:00	0.0047	0.0075	0.0088	0.0092	0.0106	0.0087	0.0073
09:00 - 10:00	0.0048	0.0078	0.0095	0.0096	0.0089	0.0063	0.0071
10:00 - 11:00	0.0074	0.0084	0.0101	0.0103	0.0100	0.0069	0.0074
11:00 - 12:00	0.0066	0.0043	0.0074	0.0089	0.0081	0.0071	0.0071
12:00 - 13:00	0.0059	0.0070	0.0075	0.0069	0.0061	0.0065	0.0070
13:00 - 14:00	0.0045	0.0062	0.0060	0.0085	0.0053	0.0042	0.0062
14:00 - 15:00	0.0044	0.0040	0.0079	0.0047	0.0040	0.0041	0.0054
15:00 - 16:00	0.0044	0.0044	0.0092	0.0047	0.0042	0.0046	0.0064
16:00 - 17:00	0.0059	0.0055	0.0152	0.0063	0.0068	0.0052	0.0087
17:00 - 18:00	0.0072	0.0050	0.0172	0.0056	0.0081	0.0070	0.0046
18:00 - 19:00	0.0070	0.0084	0.0135	0.0036	0.0090	0.0068	0.0062
19:00 - 20:00	0.0042	0.0040	0.0114	0.0042	0.0092	0.0059	0.0059
20:00 - 21:00	0.0042	0.0032	0.0065	0.0048	0.0095	0.0054	0.0033
21:00 - 22:00	0.0083	0.0054	0.0070	0.0060	0.0089	0.0074	0.0040
22:00 - 23:00	0.0065	0.0080	0.0068	0.0077	0.0092	0.0115	0.0047
23:00 - 00:00	0.0070	0.0099	0.0076	0.0062	0.0081	0.0075	0.0039
00:00 - 01:00	0.0082	0.0055	0.0069	0.0048	0.0047	0.0044	0.0036
01:00 - 02:00	0.0040	0.0055	0.0039	0.0072	0.0046	0.0050	0.0028
02:00 - 03:00	0.0018	0.0044	0.0028	0.0071	0.0055	0.0058	0.0030
03:00 - 04:00	0.0029	0.0046	0.0060	0.0058	0.0062	0.0067	0.0038
04:00 - 05:00	0.0044	0.0043	0.0092	0.0086	0.0086	0.0084	0.0057
05:00 - 06:00	0.0080	0.0051	0.0073	0.0094	0.0115	0.0087	0.0075
06:00 - 07:00	0.0067	0.0086	0.0092	0.0113	0.0118	0.0090	0.0042
Average-24Hr*	0.0055	0.0057	0.0084	0.0071	0.0076	0.0068	0.0054
Max-1Hr	0.0082	0.0099	0.0172	0.0113	0.0118	0.0115	0.0078
Min-1Hr	0.0018	0.0032	0.0028	0.0036	0.0040	0.0041	0.0028
Standard-1Hr	0.17 ppm(320 ug/cu.m)						
Standard-24Hr							

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: BST ENPOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 1433/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 04-05/07/2022	ANALYTICAL DATE	: 08/07/2022
SAMPLING TIME	: 11:15-11:30	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 06/07/2022	FILE CODE	: 222028_TO-15_July
REPORT DATE	: 12/07/2022		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* (µg/m ³)
			Ban Pong		
	ppbv	µg/m ³	ppbv	µg/m ³	
1,3-butadiene	0.003	0.007	ND	ND	5.3
Cyclohexane	0.02	0.07	0.59	2.03	-
Toluene	0.02	0.08	3.21	12.09	-
Styrene	0.02	0.09	0.08	0.34	-

Methods for the Determination of Toxic Organic Compounds in Ambient Air, EPA Methods TO-15, 1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

NR

(Mrs. Araya Tipparak)

Technical Management Team

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4. - Not available.



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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 1433/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 04-05/07/2022	ANALYTICAL DATE	: 08/07/2022
SAMPLING TIME	: 10:20-09:59	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 06/07/2022	FILE CODE	: 222028_TO-15_July
REPORT DATE	: 12/07/2022		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* (µg/m ³)
			Sol Ruam Pattana		
	ppbv	µg/m ³	ppbv	µg/m ³	
1,3-butadiene	0.003	0.007	2.39	5.07	5.3
Cyclohexane	0.02	0.07	1.87	6.44	-
Toluene	0.02	0.08	0.47	1.77	-
Styrene	0.02	0.09	0.84	3.58	-

Methods for the Determination of Toxic Organic Compounds in Ambient Air, EPA Methods TO-15, 1999

Jutarat Jaemruen

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Analyst

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(Mrs. Araya Tipparak)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : BST ENEOS Elastomer Co., Ltd. (BEE) REQUEST SERVICE No. : 1433/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Subatmospheric Pressure Sampling
SAMPLING DATE : 04-05/07/2022 ANALYTICAL DATE : 08/07/2022
SAMPLING TIME : 09:55-09:39 SAMPLE CONDITION : Normal
RECEIVED DATE : 06/07/2022 FILE CODE : 222028_TO-15 July
REPORT DATE : 12/07/2022

Compound	SAMPLING LOCATION				STANDARD* (µg/m ³)
	Non Detection		Wat Map Cha Leed		
	ppbv	µg/m ³	ppbv	µg/m ³	
1,3-butadiene	0.003	0.007	ND	ND	5.3
Cyclohexane	0.02	0.07	0.02	0.07	-
Toluene	0.02	0.08	0.17	0.64	-
Styrene	0.02	0.09	0.02	0.09	-

Methods for the Determination of Toxic Organic Compounds in Ambient Air 2nd : EPA Methods TO-15, 1999

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(Miss Jutarat Jaemruen)

Analyst

(Mrs. Araya Tipparak)

(Mrs. Araya Tipparak)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME : BST ENEOS Elastomer Co., Ltd. (BEE) REQUEST SERVICE No. : 1561/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Subatmospheric Pressure Sampling
SAMPLING DATE : 01-02/08/2022 ANALYTICAL DATE : 04/08/2022
SAMPLING TIME : 12:10-11:20 SAMPLE CONDITION : Normal
RECEIVED DATE : 03/08/2022 FILE CODE : 222028_TO-15 August
REPORT DATE : 05/08/2022

Compound	SAMPLING LOCATION				STANDARD* (µg/m ³)
	Non Detection		Ban Pong		
	ppbv	µg/m ³	ppbv	µg/m ³	
1,3-butadiene	0.003	0.007	1.24	2.74	5.3
Cyclohexane	0.02	0.07	0.50	1.72	-
Toluene	0.02	0.08	3.19	12.02	-
Styrene	0.02	0.09	0.08	0.34	-

Methods for the Determination of Toxic Organic Compounds in Ambient Air 2nd : EPA Methods TO-15, 1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Sirinwan Chimsanga

(Miss Sirinwan Chimsanga)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 1561/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 01-02/08/2022	ANALYTICAL DATE	: 04/08/2022
SAMPLING TIME	: 12:29-11:29	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 03/08/2022	FILE CODE	: 222028_TO-15_August
REPORT DATE	: 05/08/2022		

Compound	Non Detection		SAMPLING LOCATION		STANDARD*
	ppbv	µg/m ³	Soi Ruam Pattana	µg/m ³	
1,3-butadiene	0.003	0.007	ND	ND	5.3
Cyclohexane	0.02	0.07	0.15	0.52	-
Toluene	0.02	0.08	1.86	7.01	-
Styrene	0.02	0.09	0.06	0.26	-

Method for the Determination of Toxic Organic Compounds in Ambient Air, 2nd EPA Method TO-15, 1999

Jutarat Jaemuen

(Miss Jutarat Jaemuen)

Analyst

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 1561/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 01-02/08/2022	ANALYTICAL DATE	: 04/08/2022
SAMPLING TIME	: 11:48-11:07	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 03/08/2022	FILE CODE	: 222028_TO-15_August
REPORT DATE	: 05/08/2022		

Compound	Non Detection		SAMPLING LOCATION		STANDARD*
	ppbv	µg/m ³	Wat Map Cha Loed	µg/m ³	
1,3-butadiene	0.003	0.007	ND	ND	5.3
Cyclohexane	0.02	0.07	0.31	1.07	-
Toluene	0.02	0.08	1.95	7.35	-
Styrene	0.02	0.09	0.08	0.34	-

Method for the Determination of Toxic Organic Compounds in Ambient Air, 2nd EPA Method TO-15, 1999

Jutarat Jaemuen

(Miss Jutarat Jaemuen)

Analyst

Siriwan Chimsa-nga

(Miss Siriwan Chimsa-nga)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: BST HNEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 1818/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 05-06/09/2022	ANALYTICAL DATE	: 09, 12/09/2022
SAMPLING TIME	: 15:55-16:00	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 07/09/2022	FILE CODE	: 222028_TO-15_September
REPORT DATE	: 13/09/2022		

Compound	SAMPLING LOCATION				STANDARD* (µg/m ³)
	Non Detection		Ban Pong		
	ppbv	µg/m ³	ppbv	µg/m ³	
1,3-butadiene	0.003	0.007	ND	ND	5.3
Cyclohexane	0.02	0.07	0.63	2.17	-
Toluene	0.02	0.08	4.11	15.48	-
Styrene	0.02	0.09	0.06	0.26	-

Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd : EPA Methods TO-15, 1999

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

Analyst

Araya Tipparuk
(Mrs. Araya Tipparuk)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEL)	REQUEST SERVICE No.	: 1818/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 05-06/09/2022	ANALYTICAL DATE	: 09, 12/09/2022
SAMPLING TIME	: 16:16-16:20	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 07/09/2022	FILE CODE	: 222028_TO-15_September
REPORT DATE	: 13/09/2022		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* (µg/m ³)
			Sol Ruam Pattana		
	ppbv	µg/m ³	ppbv	µg/m ³	
1,3-butadiene	0.003	0.007	0.44	0.97	5.3
Cyclohexane	0.02	0.07	1.24	4.27	-
Toluene	0.02	0.08	2.01	7.57	-
Styrene	0.02	0.09	0.10	0.43	-

Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd : EPA Methods TO-15, 1999

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

Analyst

Araya Tipparuk
(Mrs. Araya Tipparuk)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: BST ENBOS Elastomer Co., Ltd. (BES)	REQUEST SERVICE No.	: 1818/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 05-06/09/2022	ANALYTICAL DATE	: 09, 12/09/2022
SAMPLING TIME	: 15:30-15:40	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 07/09/2022	FILE CODE	: 222028_TO-15_September
REPORT DATE	: 13/09/2022		

Compound	Non Detection		SAMPLING LOCATION		STANDARD*
			Wat Map Cha Leed		
	ppbv	µg/m ³	ppbv	µg/m ³	
1,3-butadiene	0.003	0.007	ND	ND	5.3
Cyclohexane	0.02	0.07	0.35	1.21	-
Toluene	0.02	0.08	1.80	6.78	-
Styrene	0.02	0.09	0.06	0.26	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, EPA Method TO-14, 1999

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

Analyst

NR
(Mrs. Atsya Tipparak)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: BST ENBOS Elastomer Co., Ltd. (BES)	REQUEST SERVICE No.	: 1999/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 04-05/10/2022	ANALYTICAL DATE	: 07, 10/10/2022
SAMPLING TIME	: 12:21-11:46	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 06/10/2022	FILE CODE	: 222028_TO-15_October
REPORT DATE	: 11/10/2022		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* ($\mu\text{g}/\text{m}^3$)
			Ban Pang		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
1,3-butadiene	0.003	0.007	ND	ND	5.3
Cyclohexane	0.02	0.07	0.53	1.89	-
Toluene	0.02	0.08	12.01	45.24	-
Styrene	0.02	0.09	0.16	0.68	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, EPA Method TO-14, 1999

Siriwan Chimsa-nga
(Miss Siriwan Chimsa-nga)

Analyst

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(Mrs. Atsya Tipparak)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: BST ENBOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 1999/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 04-05/10/2022	ANALYTICAL DATE	: 07, 10/10/2022
SAMPLING TIME	: 15:57-14:57	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 06-10/2022	FILE CODE	: 222028_TO-15_October
REPORT DATE	: 11/10/2022		

Compound	Non Detection		SAMPLING LOCATION		STANDARD* (µg/m ³)
			Sai Ruam Pattana		
	ppbv	µg/m ³	ppbv	µg/m ³	
1,3-butadiene	0.063	0.007	ND	ND	5.3
Cyclohexane	0.02	0.07	0.35	1.89	-
Toluene	0.02	0.08	4.46	20.94	-
Styrene	0.02	0.09	0.12	0.51	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd EPA Method TO-15.1399

Sirivan Chimsa-nga
(Mrs. Sirivan Chimsa-nga)

Analyst

NT
(Mrs. Araya Tipparuk)

Technical Management Team

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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: BST ENBOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 1999/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 04-05/10/2022	ANALYTICAL DATE	: 07, 10/10/2022
SAMPLING TIME	: 11:54-11:20	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 06/10/2022	FILE CODE	: 222028_TO-15_October
REPORT DATE	: 11/10/2022		

Compound	Non Detection		SAMPLING LOCATION		STANDARD ^a (µg/m ³)
			Wat Map Choo Leed		
	ppbv	µg/m ³	ppbv	µg/m ³	
1,3-butadiene	0.003	0.007	ND	ND	5.3
Cyclohexane	0.02	0.07	0.35	1.21	-
Toluene	0.02	0.08	3.97	11.19	-
Styrene	0.02	0.09	0.12	0.51	-

Methods for the Determination of Toxic Organic Compound in Ambient Air, 2nd EPA Method TO-15.1399

Sirivan Chimsa-nga
(Mrs. Sirivan Chimsa-nga)

Analyst

NT
(Mrs. Araya Tipparuk)

Technical Management Team

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

AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 2211/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 02-03/11/2022	ANALYTICAL DATE	: 08-09/11/2022
SAMPLING TIME	: 16:13-15:13	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 04/11/2022	FILE CODE	: 222028_TO-15_November
REPORT DATE	: 17/11/2022		

Compound	Non Detection		SAMPLING LOCATION		STANDARD*
	ppbv	µg/m ³	Ban Pong		
			ppbv	µg/m ³	(µg/m ³)
1,3-butadiene	0.003	0.007	ND	ND	5.3
Cyclohexane	0.02	0.07	0.48	1.65	
Toluene	0.02	0.08	24.55	92.48	
Styrene	0.02	0.09	0.12	0.51	

Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd EPA Methods TO-15, 1999

Jularat Jaemruen

(Miss Jularat Jaemruen)

Analyst

A R

(Mrs. Araya Tippaak)

Technical Management Team

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4. Not available.



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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 2211/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 02-03/11/2022	ANALYTICAL DATE	: 08-09/11/2022
SAMPLING TIME	: 16:33-15:35	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 04/11/2022	FILE CODE	: 222028_TO-15_November
REPORT DATE	: 17/11/2022		

Compound	Non Detection		SAMPLING LOCATION		STANDARD*
	ppbv	µg/m ³	Soi Ruam Pattana		
			ppbv	µg/m ³	(µg/m ³)
1,3-butadiene	0.003	0.007	ND	ND	5.3
Cyclohexane	0.02	0.07	0.83	2.86	
Toluene	0.02	0.08	8.32	31.34	
Styrene	0.02	0.09	0.10	0.43	

Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd EPA Methods TO-15, 1999

Jularat Jaemruen

(Miss Jularat Jaemruen)

Analyst

A R

(Mrs. Araya Tippaak)

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 2211/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 02-03/11/2022	ANALYTICAL DATE	: 08-09/11/2022
SAMPLING TIME	: 15:48-14:56	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 04/11/2022	FILE CODE	: 222028_TO-15_November
REPORT DATE	: 17/11/2022		

Compound	SAMPLING LOCATION				STANDARD* (µg/m ³)
	Non Detection		Wat Map Cha Loed		
	ppbv	µg/m ³	ppbv	µg/m ³	
1,3-butadiene	0.003	0.007	ND	ND	5.3
Cyclohexane	0.02	0.07	0.24	0.83	-
Toluene	0.02	0.08	2.29	8.63	-
Styrene	0.02	0.09	0.06	0.26	-

Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd : EPA Methods TO-15,1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

A. R.

(Mrs. Araya Tipparuk)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 2537/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 21-22/12/2022	ANALYTICAL DATE	: 24, 28/12/2022
SAMPLING TIME	: 15:20-14:56	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 23/12/2022	FILE CODE	: 222028_TO-15_December
REPORT DATE	: 28/12/2022		

Compound	SAMPLING LOCATION				STANDARD* ($\mu\text{g}/\text{m}^3$)
	Non Detection		Ban Pong		
	ppbv	$\mu\text{g}/\text{m}^3$	ppbv	$\mu\text{g}/\text{m}^3$	
1,3-butadiene	0.003	0.007	ND	ND	5.3
Cyclohexane	0.02	0.07	0.46	1.58	-
Toluene	0.02	0.08	6.28	16.12	-
Styrene	0.02	0.09	0.12	0.51	-

Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd : EPA Methods TO-15,1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

A. R.

(Mrs. Araya Tipparuk)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 2537/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 21-22/12/2022	ANALYTICAL DATE	: 24, 28/12/2022
SAMPLING TIME	: 15:40-15:12	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 23/12/2022	FILE CODE	: 222028_10-15_December
REPORT DATE	: 28/12/2022		

Compound	Non Detection		SAMPLING LOCATION		STANDARD*
	ppbv	µg/m ³	Soi Ruam Patana	µg/m ³	
1,3-butadiene	0.003	0.007	ND	ND	5.3
Cyclohexane	0.02	0.07	0.46	1.58	
Toluene	0.02	0.08	3.45	13.00	
Styrene	0.02	0.09	0.31	1.32	

Method for the Determination of Toxic Organic Compounds in Ambient Air, 2nd : EPA Method TO-15, 1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Araya Tippiaruk

(Mrs. Araya Tippiaruk)

Technical Management Team

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AMBIENT AIR QUALITY ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 2537/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Subatmospheric Pressure Sampling
SAMPLING DATE	: 21-22/12/2022	ANALYTICAL DATE	: 24, 28/12/2022
SAMPLING TIME	: 15:00-14:42	SAMPLE CONDITION	: Normal
RECEIVED DATE	: 23/12/2022	FILE CODE	: 222028_10-15_December
REPORT DATE	: 28/12/2022		

Compound	Non Detection		SAMPLING LOCATION		STANDARD*
	ppbv	µg/m ³	Wat Map Cha Loed	µg/m ³	
1,3-butadiene	0.003	0.007	ND	ND	5.3
Cyclohexane	0.02	0.07	0.31	1.07	
Toluene	0.02	0.08	2.40	9.04	
Styrene	0.02	0.09	0.08	0.34	

Method for the Determination of Toxic Organic Compounds in Ambient Air, 2nd : EPA Method TO-15, 1999

Jutarat Jaemruen

(Miss Jutarat Jaemruen)

Analyst

Araya Tippiaruk

(Mrs. Araya Tippiaruk)

Technical Management Team

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ภาคผนวก ง.2-4

ผลการตรวจวัดระดับเสียงในบรรยากาศ



Noise Monitoring Result : Community Noise

MTR-BEE

Location : Center of North Fence

Monitor Period : 03-10 Sep 2022

SLM Model : RION NL-21

Serial No : 00187497

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : RION NC-74

Serial No : 34283648

Calibration Ref dB(A) : 94.0

Certified Date : 24 Dec 2021

SLM Reading / Adjust dB(A) : 93.8/0.2

Expire Date : 23 Dec 2022

Cal Sheet No.: NC-74-2022-079

Time	Equivalent Sound Pressure Level (dB(A))						
	03-04 Sep 2022	04-05 Sep 2022	05-06 Sep 2022	06-07 Sep 2022	07-08 Sep 2022	08-09 Sep 2022	09-10 Sep 2022
16:00 - 17:00	63.8	60.2	68.8	69.5	65.8	67.8	67.9
17:00 - 18:00	64.5	60.8	69.4	68.0	66.2	66.7	70.1
18:00 - 19:00	68.1	61.5	70.7	65.4	66.1	67.9	67.9
19:00 - 20:00	63.0	60.1	69.4	65.2	64.2	64.9	67.4
20:00 - 21:00	60.5	66.8	67.2	63.6	66.5	66.1	69.0
21:00 - 22:00	60.2	56.4	63.6	60.7	67.3	65.2	69.7
22:00 - 23:00	56.9	64.6	63.7	59.3	63.4	62.6	67.2
23:00 - 00:00	58.2	65.6	57.8	56.5	63.7	60.0	64.2
00:00 - 01:00	57.3	66.0	59.9	57.8	60.7	59.6	56.2
01:00 - 02:00	54.7	64.6	58.7	56.3	59.8	58.2	56.6
02:00 - 03:00	56.4	60.1	56.0	62.6	59.6	57.0	56.8
03:00 - 04:00	57.1	58.9	57.5	66.9	60.0	56.2	56.4
04:00 - 05:00	56.3	61.8	57.8	72.3	58.6	57.8	56.7
05:00 - 06:00	59.9	61.3	59.9	67.1	61.4	58.0	58.1
06:00 - 07:00	69.6	68.5	66.5	67.5	67.0	66.3	64.5
07:00 - 08:00	75.0	67.9	67.7	69.3	68.0	67.7	65.6
08:00 - 09:00	66.2	70.4	68.4	69.0	66.3	67.1	67.3
09:00 - 10:00	64.3	72.7	68.7	67.1	66.2	66.4	70.9
10:00 - 11:00	83.2	68.6	67.1	67.3	67.0	67.0	66.0
11:00 - 12:00	62.4	67.3	66.3	67.3	67.3	69.4	68.7
12:00 - 13:00	61.9	66.2	68.0	65.1	66.0	69.3	69.4
13:00 - 14:00	61.5	70.1	72.8	67.3	67.4	67.0	66.0
14:00 - 15:00	61.0	71.1	66.9	67.2	66.2	69.0	68.0
15:00 - 16:00	60.7	67.7	67.6	67.8	66.4	67.4	67.8
Leq(24)*	65.1	66.8	67.0	66.9	65.5	65.9	66.9
L _{dn}	69.2	71.2	69.7	73.0	69.8	69.0	70.0
L _{max} **	98.1	87.9	89.5	86.7	85.8	89.0	89.1
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 16:00-16:00

** Maximum Sound Pressure Level between 16:00-16:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preda S.
(Miss Preda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-BEE

Location : Center of North Fence

Monitor Period : 03-10 Sep 2022

SLM Model : RION NL-21

Serial No : 00187497

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : RION NC-74

Serial No : 34283648

Calibration Ref dB(A) : 94.0

Certified Date : 24 Dec 2021

SLM Reading / Adjust dB(A) : 93.8/0.2

Expire Date : 23 Dec 2022

Cal Sheet No.: NC-74-2022-079

Time	L90 (dB(A))						
	03-04 Sep 2022	04-05 Sep 2022	05-06 Sep 2022	06-07 Sep 2022	07-08 Sep 2022	08-09 Sep 2022	09-10 Sep 2022
16:00 - 17:00	56.8	51.8	60.9	63.9	59.6	63.3	61.1
17:00 - 18:00	56.1	51.5	62.4	64.9	60.3	60.9	63.4
18:00 - 19:00	58.2	52.9	64.9	60.4	59.6	62.2	61.0
19:00 - 20:00	56.4	51.9	62.2	59.2	58.9	60.3	60.8
20:00 - 21:00	56.2	52.3	61.0	56.5	63.7	60.2	59.3
21:00 - 22:00	54.0	52.8	56.5	56.1	62.4	58.7	61.0
22:00 - 23:00	53.8	56.4	56.3	55.7	58.3	58.1	57.9
23:00 - 00:00	51.3	63.0	54.3	54.7	58.4	56.6	54.3
00:00 - 01:00	50.0	64.5	55.8	53.8	56.9	55.8	54.0
01:00 - 02:00	49.9	62.8	53.3	53.6	54.9	54.5	51.1
02:00 - 03:00	49.9	57.6	53.0	57.2	54.5	53.3	51.3
03:00 - 04:00	49.9	54.7	52.9	59.4	55.9	53.3	52.7
04:00 - 05:00	49.8	55.8	54.2	67.2	54.9	52.9	53.5
05:00 - 06:00	53.1	57.9	54.5	62.1	56.1	51.7	54.1
06:00 - 07:00	58.3	59.9	58.2	62.5	59.7	58.6	67.1
07:00 - 08:00	66.7	62.6	62.6	66.4	62.6	62.4	59.1
08:00 - 09:00	64.0	62.2	62.2	63.6	62.2	60.3	61.4
09:00 - 10:00	58.8	60.9	61.3	62.0	61.2	59.8	61.9
10:00 - 11:00	56.5	59.5	59.5	60.3	60.7	60.5	59.3
11:00 - 12:00	54.1	59.6	59.6	59.7	60.8	61.6	61.4
12:00 - 13:00	52.3	59.8	60.1	59.0	60.3	60.8	60.7
13:00 - 14:00	62.9	62.1	66.6	61.4	62.4	60.4	60.8
14:00 - 15:00	52.9	61.3	61.1	58.7	61.2	62.9	60.9
15:00 - 16:00	52.6	60.8	62.3	59.3	60.6	60.8	60.8
L90(avg)*	57.6	59.8	60.6	61.5	60.2	59.8	59.5

Remark : * Average time between 16:00-16:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preda S.
(Miss Preda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-BEE

Location : Center of Northeast Fence

Monitor Period : 03-10 Sep 2022

SLM Model : RION NL-21

Serial No : 00187505

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : RION NC-74

Serial No : 34283648

Calibration Ref dB(A) : 94.0

Certified Date : 24 Dec 2021

SLM Reading / Adjust dB(A) : 93.8/0.2

Expire Date : 23 Dec 2022

Cal Sheet No.: NC-74-2022-079

Time	Equivalent Sound Pressure Level (dB(A))							
	03-04 Sep 2022	04-05 Sep 2022	05-06 Sep 2022	06-07 Sep 2022	07-08 Sep 2022	08-09 Sep 2022	09-10 Sep 2022	
15:00 - 16:00	63.4	69.0	68.0	67.5	68.2	70.6	67.7	
16:00 - 17:00	62.5	68.9	67.7	67.9	66.2	67.0	67.5	
17:00 - 18:00	62.4	68.0	69.3	68.7	66.4	66.5	65.8	
18:00 - 19:00	62.5	66.7	70.6	67.1	66.4	66.6	66.4	
19:00 - 20:00	62.3	66.7	67.5	66.8	66.4	66.5	66.2	
20:00 - 21:00	62.3	66.6	69.0	66.7	69.0	66.2	66.4	
21:00 - 22:00	62.3	66.5	67.5	66.5	66.8	66.7	66.3	
22:00 - 23:00	62.4	66.6	67.0	66.3	67.3	66.7	66.2	
23:00 - 00:00	62.3	66.6	66.6	66.0	68.9	68.5	66.1	
00:00 - 01:00	62.3	66.5	66.7	65.9	66.8	66.4	66.0	
01:00 - 02:00	62.4	66.3	66.7	66.0	66.8	68.3	65.9	
02:00 - 03:00	62.4	66.4	66.5	66.7	66.6	66.2	65.6	
03:00 - 04:00	62.3	69.0	66.5	74.0	66.6	65.0	65.8	
04:00 - 05:00	62.4	69.6	66.3	77.4	66.4	66.1	65.6	
05:00 - 06:00	62.4	69.6	66.3	72.9	66.4	66.2	65.9	
06:00 - 07:00	71.5	69.6	66.4	70.0	66.4	66.2	65.9	
07:00 - 08:00	72.7	69.6	66.5	71.0	66.3	66.2	65.9	
08:00 - 09:00	67.8	69.7	67.1	69.2	66.5	66.4	66.3	
09:00 - 10:00	68.1	69.7	68.7	68.2	67.4	67.6	66.9	
10:00 - 11:00	67.5	69.7	67.8	68.2	66.8	68.4	66.9	
11:00 - 12:00	67.6	69.7	67.1	67.1	67.1	67.1	66.5	
12:00 - 13:00	66.9	69.8	69.0	66.6	66.3	66.5	66.2	
13:00 - 14:00	67.3	69.8	73.0	68.1	68.8	68.6	67.3	
14:00 - 15:00	66.9	68.3	67.6	70.7	73.0	68.3	66.6	
Leq(24)*	66.2	68.6	68.1	69.8	67.7	67.1	66.4	
Ldn	71.7	74.6	73.4	77.7	73.6	72.9	72.5	
Lmax**	88.1	80.7	89.5	84.9	85.6	86.0	87.1	

Standard-24Hr

70 dB(A)

Standard-Max

115 dB(A)

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

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-BEE

Location : Center of Northeast Fence

Monitor Period : 03-10 Sep 2022

SLM Model : RION NL-21

Serial No : 00187505

Site Operator : Mr. Siwanon Kulawong

Calibrator Model : RION NC-74

Serial No : 34283648

Calibration Ref dB(A) : 94.0

Certified Date : 24 Dec 2021

SLM Reading / Adjust dB(A) : 93.8/0.2

Expire Date : 23 Dec 2022

Cal Sheet No.: NC-74-2022-079

Time	L90 (dB(A))							
	03-04 Sep 2022	04-05 Sep 2022	05-06 Sep 2022	06-07 Sep 2022	07-08 Sep 2022	08-09 Sep 2022	09-10 Sep 2022	
15:00 - 16:00	62.3	66.9	66.3	67.1	66.2	68.9	66.0	
16:00 - 17:00	62.1	67.2	66.4	67.3	65.8	65.9	66.1	
17:00 - 18:00	62.1	66.6	66.3	67.6	66.0	65.9	66.1	
18:00 - 19:00	62.3	66.4	67.5	66.8	66.2	66.1	66.1	
19:00 - 20:00	62.2	66.4	67.0	66.5	66.2	65.9	66.1	
20:00 - 21:00	62.2	66.2	67.1	66.4	66.8	65.3	66.1	
21:00 - 22:00	62.2	66.3	66.7	66.3	67.4	65.9	66.1	
22:00 - 23:00	62.3	66.2	66.8	66.1	66.8	66.5	66.1	
23:00 - 00:00	62.2	66.5	66.4	65.8	66.8	66.2	65.9	
00:00 - 01:00	62.2	66.4	66.5	65.7	66.5	66.2	65.8	
01:00 - 02:00	62.2	66.2	66.5	65.8	66.4	66.1	65.7	
02:00 - 03:00	62.2	66.2	66.4	66.4	66.4	66.0	65.6	
03:00 - 04:00	62.2	66.4	66.3	70.3	66.3	65.9	65.6	
04:00 - 05:00	62.2	69.4	66.2	72.8	66.2	65.9	65.6	
05:00 - 06:00	62.1	69.4	66.1	70.0	66.2	66.0	65.7	
06:00 - 07:00	62.3	69.4	66.1	68.1	66.2	66.1	65.6	
07:00 - 08:00	67.7	69.4	66.3	70.3	66.1	66.0	65.7	
08:00 - 09:00	67.3	69.4	66.7	68.2	66.1	66.0	66.0	
09:00 - 10:00	67.2	69.4	66.9	67.5	66.2	66.0	66.3	
10:00 - 11:00	66.5	69.6	66.6	66.9	66.1	66.0	66.2	
11:00 - 12:00	66.4	69.6	66.7	66.5	66.1	65.8	66.1	
12:00 - 13:00	66.3	69.6	66.6	66.3	65.9	65.9	65.9	
13:00 - 14:00	66.2	69.6	68.5	66.7	66.2	66.0	66.2	
14:00 - 15:00	67.0	66.5	67.1	66.4	66.4	66.2	66.0	
L90(avg)*	64.4	68.0	66.7	67.8	66.3	66.1	66.0	

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Preeda Somjai)
Technical Management Team

MTR-BEE

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

MTR-BEE

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Community Noise

MTR-BEE

Location : Center of Southeast Fence
SLM Model : RION NL-21
Site Operator : Mr. Siwanon Kulawong

Monitor Period : 03-10 Sep 2022
Serial No : 00198277

Calibrator Model : RION NC-74
Calibration Ref dB(A) : 94.0
SLM Reading / Adjust dB(A) : 94.0/0.0
Cal Sheet No.: NC-74-2022-079

Serial No : 34283646
Certified Date : 24 Dec 2021
Expire Date : 23 Dec 2022

Time	Equivalent Sound Pressure Level (dB(A))							
	03-04 Sep 2022	04-05 Sep 2022	05-06 Sep 2022	06-07 Sep 2022	07-08 Sep 2022	08-09 Sep 2022	09-10 Sep 2022	10-10 Sep 2022
15:00 - 16:00	67.6	67.3	68.0	68.5	68.2	67.3	66.8	
16:00 - 17:00	67.7	67.3	68.2	68.1	67.5	67.3	66.8	
17:00 - 18:00	67.6	67.6	68.2	67.3	67.2	67.4	67.3	
18:00 - 19:00	67.7	67.9	69.0	66.7	67.5	67.2	67.7	
19:00 - 20:00	68.1	67.9	67.7	67.2	67.2	67.4	67.9	
20:00 - 21:00	68.1	68.4	68.1	67.1	66.8	67.6	67.5	
21:00 - 22:00	68.2	68.5	67.8	67.6	68.4	67.1	67.7	
22:00 - 23:00	68.2	68.9	67.5	67.9	66.6	66.1	67.6	
23:00 - 00:00	68.1	68.5	67.7	67.7	66.1	67.2	67.7	
00:00 - 01:00	68.0	68.3	67.6	67.8	66.1	67.5	69.1	
01:00 - 02:00	68.1	68.1	67.6	67.6	65.0	67.3	69.9	
02:00 - 03:00	68.1	68.2	67.4	67.1	66.0	67.1	67.8	
03:00 - 04:00	68.1	68.0	67.5	67.3	66.1	67.4	67.7	
04:00 - 05:00	68.2	68.0	68.1	68.8	66.1	67.7	67.7	
05:00 - 06:00	68.0	68.0	68.1	67.1	67.6	67.8	67.8	
06:00 - 07:00	70.2	67.8	68.3	66.4	65.3	67.7	67.8	
07:00 - 08:00	74.3	67.7	68.2	66.5	66.8	67.8	67.6	
08:00 - 09:00	68.7	68.0	69.2	66.2	67.3	67.6	67.4	
09:00 - 10:00	68.4	68.2	68.0	66.6	67.6	67.6	67.4	
10:00 - 11:00	67.9	68.3	68.1	67.0	67.4	67.9	67.4	
11:00 - 12:00	68.0	68.0	68.0	66.9	67.8	67.3	67.3	
12:00 - 13:00	67.9	67.7	67.9	67.0	67.1	67.1	67.2	
13:00 - 14:00	67.5	68.1	68.9	67.1	67.2	67.0	67.1	
14:00 - 15:00	67.2	68.1	68.5	67.4	67.4	67.1	67.2	
Leq(24)*	68.7	68.0	68.1	67.3	66.9	67.4	67.7	
L ₉₀	74.9	74.6	74.3	73.9	72.8	73.7	74.5	
L _{max} **	98.2	79.2	87.6	76.2	85.5	84.7	89.8	
Standard-24Hr	70 dB(A)							
Standard-Max	115 dB(A)							

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

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

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise

MTR-BEE

Location : Center of Southeast Fence
SLM Model : RION NL-21
Site Operator : Mr. Siwanon Kulawong

Monitor Period : 03-10 Sep 2022
Serial No : 00198277

Calibrator Model : RION NC-74
Calibration Ref dB(A) : 94.0
SLM Reading / Adjust dB(A) : 94.0/0.0
Cal Sheet No.: NC-74-2022-079

Serial No : 34283646
Certified Date : 24 Dec 2021
Expire Date : 23 Dec 2022

Time	L90 (dB(A))							
	03-04 Sep 2022	04-05 Sep 2022	05-06 Sep 2022	06-07 Sep 2022	07-08 Sep 2022	08-09 Sep 2022	09-10 Sep 2022	10-10 Sep 2022
15:00 - 16:00	67.4	67.0	67.6	68.2	67.5	66.8	66.3	
16:00 - 17:00	67.5	67.0	67.3	67.5	67.1	66.9	66.4	
17:00 - 18:00	67.3	67.3	67.8	66.8	66.9	67.0	66.8	
18:00 - 19:00	67.4	67.5	68.0	66.4	67.2	66.7	67.4	
19:00 - 20:00	67.7	67.6	67.4	66.8	66.8	67.2	67.4	
20:00 - 21:00	67.8	67.7	67.5	66.7	66.4	67.4	67.4	
21:00 - 22:00	67.9	68.1	67.3	67.0	66.1	66.0	67.5	
22:00 - 23:00	67.8	68.0	67.2	67.6	66.3	65.4	67.4	
23:00 - 00:00	67.8	68.1	67.4	67.4	65.7	66.9	67.5	
00:00 - 01:00	67.7	67.8	67.2	67.3	65.8	67.2	67.5	
01:00 - 02:00	67.7	67.8	67.3	67.4	65.8	67.0	67.4	
02:00 - 03:00	67.7	67.8	66.9	66.3	65.8	66.8	67.5	
03:00 - 04:00	67.7	67.7	67.0	66.4	65.9	66.8	67.5	
04:00 - 05:00	67.8	67.6	67.6	66.8	65.9	67.5	67.4	
05:00 - 06:00	67.4	67.6	67.7	66.5	65.9	67.4	67.5	
06:00 - 07:00	67.8	67.4	67.9	66.1	65.9	67.5	67.5	
07:00 - 08:00	68.8	67.4	67.9	68.2	66.2	67.6	67.3	
08:00 - 09:00	68.3	67.8	67.9	65.9	67.0	67.3	67.1	
09:00 - 10:00	67.8	67.9	67.7	65.1	67.2	67.3	66.9	
10:00 - 11:00	67.5	67.9	67.7	66.5	67.0	67.1	67.0	
11:00 - 12:00	67.6	67.6	67.7	66.5	66.9	66.9	67.1	
12:00 - 13:00	67.6	67.3	67.5	66.7	66.8	66.7	66.9	
13:00 - 14:00	67.2	67.7	67.3	66.8	66.9	66.7	66.8	
14:00 - 15:00	66.9	67.7	68.2	67.1	66.9	66.7	66.9	
L90(avg)*	67.7	67.6	67.6	66.8	66.5	67.0	67.2	

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

Preeda S.
(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

Location : Center of West Fence
SLM Model : RION NL-21
Site Operator : Mr. Siwanon Kul

Monitor Period : 03-10 Sep 2022

Serial No : 00198274

Calibrator Model : RION NC-74

Serial No : 34283648

Calibration Ref dB(A) : 94.0

Certified Date : 24 Dec 2021

SLM Reading / Adjust dB(A) : 93.7/0.3

Expire Date : 23 Dec 2022

Cal Sheet No.: NC-74-2022-079

Time	Equivalent Sound Pressure Level (dB(A))							
	05-04 Sep 2022	04-05 Sep 2022	05-06 Sep 2022	06-07 Sep 2022	07-08 Sep 2022	08-09 Sep 2022	09-10 Sep 2022	
16:00 - 17:00	66.1	65.3	63.6	63.1	63.8	63.1	63.6	
17:00 - 18:00	64.3	64.1	63.1	63.5	63.6	63.0	63.2	
18:00 - 19:00	64.0	63.3	64.9	63.2	63.3	63.0	62.9	
19:00 - 20:00	63.9	63.1	63.2	63.2	63.5	62.9	62.8	
20:00 - 21:00	64.0	65.1	63.2	63.6	63.7	63.1	62.8	
21:00 - 22:00	66.8	63.3	63.5	63.1	64.3	63.2	63.0	
22:00 - 23:00	67.6	64.2	63.4	63.2	63.5	63.4	63.5	
23:00 - 00:00	66.6	64.4	63.3	62.9	64.0	63.3	63.4	
00:00 - 01:00	66.7	64.4	63.6	63.0	63.4	63.2	62.8	
01:00 - 02:00	67.9	64.0	63.8	63.1	63.2	63.0	62.9	
02:00 - 03:00	68.0	63.7	63.6	63.1	63.4	63.0	63.8	
03:00 - 04:00	67.0	63.9	63.6	65.6	63.5	62.9	64.7	
04:00 - 05:00	66.2	64.0	63.5	66.7	63.6	62.9	64.0	
05:00 - 06:00	64.7	63.8	63.6	65.4	63.6	63.1	66.2	
06:00 - 07:00	68.6	64.0	63.6	64.1	63.7	63.0	65.6	
07:00 - 08:00	71.8	63.6	63.6	65.0	63.3	63.2	64.1	
08:00 - 09:00	65.2	63.5	63.7	64.8	63.3	63.5	63.7	
09:00 - 10:00	64.6	63.8	63.4	65.7	63.4	63.6	63.6	
10:00 - 11:00	64.0	63.8	63.5	64.3	64.6	65.2	64.3	
11:00 - 12:00	67.8	63.7	63.7	66.3	64.8	63.3	64.9	
12:00 - 13:00	67.0	63.5	63.2	63.9	63.1	63.9	64.1	
13:00 - 14:00	65.5	64.9	65.8	63.8	63.3	66.9	65.0	
14:00 - 15:00	64.8	66.3	63.6	63.6	64.3	65.5	64.6	
15:00 - 16:00	65.3	66.2	63.1	64.3	63.1	64.6	64.5	
Leq(24)*	66.7	64.3	63.7	64.4	63.7	63.7	64.0	
Ldn	73.5	70.5	70.0	71.1	70.0	69.6	70.6	
Lmax**	94.2	84.5	78.0	85.1	85.1	84.1	78.9	

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

Remark : * Average time between 16:00-16:00

** Maximum Sound Pressure Level between 16:00-16:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S
(Miss Preeda Somjai)
Technical Management Team

Location : Center of West Fence
SLM Model : RION NL-21
Site Operator : Mr. Siwanon Kul

Monitor Period 2003-10 Sep 2022

Serial No : 00198274

Calibrator Model : RION NC-74

Serial No : 34283648

Calibration Ref dB(A) : 94.0

Certified Date : 24 Dec 2021

SLM Reading / Adjust dB(A) : 93.7/0.3

Expire Date : 23 Dec 2022

Cal Sheet No.: NC-74-2022-079

Time	L90 (dB(A))						
	03-04 Sep 2022	04-05 Sep 2022	05-06 Sep 2022	06-07 Sep 2022	07-08 Sep 2022	08-09 Sep 2022	09-10 Sep 2022
16:00 - 17:00	63.9	63.0	63.0	62.7	63.3	62.8	62.7
17:00 - 18:00	63.6	63.3	62.6	63.1	63.3	62.8	62.5
18:00 - 19:00	63.7	63.0	63.2	62.9	63.0	62.8	62.4
19:00 - 20:00	63.7	62.7	62.8	62.9	63.2	62.7	62.6
20:00 - 21:00	63.7	62.7	62.7	63.1	63.4	62.8	62.6
21:00 - 22:00	63.9	63.0	63.3	62.9	63.6	62.9	62.6
22:00 - 23:00	63.8	63.1	63.1	62.9	63.2	63.1	63.0
23:00 - 00:00	63.8	63.9	63.1	62.7	63.4	63.0	62.8
00:00 - 01:00	63.6	64.0	63.4	62.8	63.1	63.0	62.6
01:00 - 02:00	63.8	63.9	63.8	62.9	63.0	62.8	62.6
02:00 - 03:00	63.8	63.5	63.4	62.6	63.2	62.8	63.0
03:00 - 04:00	63.7	63.6	63.4	63.0	63.3	62.7	63.6
04:00 - 05:00	63.7	63.7	63.2	63.2	63.3	62.7	63.7
05:00 - 06:00	63.7	63.4	63.3	63.9	63.4	62.6	63.8
06:00 - 07:00	64.0	63.7	63.3	63.5	63.4	62.8	64.0
07:00 - 08:00	63.2	63.5	63.3	64.5	63.1	62.6	63.9
08:00 - 09:00	64.7	63.1	63.4	63.8	63.1	63.2	63.4
09:00 - 10:00	64.1	63.4	63.0	63.9	63.1	63.1	63.2
10:00 - 11:00	63.5	63.5	63.3	63.7	62.7	63.2	63.3
11:00 - 12:00	63.1	63.1	63.2	63.7	62.5	62.9	63.1
12:00 - 13:00	63.4	62.9	62.7	63.8	62.7	63.2	63.1
13:00 - 14:00	63.6	62.9	63.5	63.4	62.7	63.4	63.3
14:00 - 15:00	63.6	63.0	63.4	63.3	62.9	64.1	63.1
15:00 - 16:00	63.5	63.1	62.7	63.3	62.8	63.7	63.1
L90(avg)*	63.8	63.3	63.2	63.4	63.1	63.0	63.1

Remark : * Average time between 16:00-16:00



(Miss Katesarin Vorradelwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Sorajai)
Technical Management Team



Noise Monitoring Result : Community Noise MTR-BEE

Location : Takuan - Ao Pradu		Monitor Period : 03-10 Sep 2022					
SLM Model : RION NL-21		Serial No : 00187481					
Site Operator : Mr. Siwanon Kulawong							
Calibrator Model : RION NC-74		Serial No : 34283648					
Calibration Ref dB(A) : 94.0		Certified Date : 24 Dec 2021					
SLM Reading / Adjust dB(A) : 93.9/0.1		Expire Date : 23 Dec 2022					
Cal Sheet No.: NC-74-2022-079							
Time	Equivalent Sound Pressure Level (dB(A))						
	03-04 Sep 2022	04-05 Sep 2022	05-06 Sep 2022	06-07 Sep 2022	07-08 Sep 2022	08-09 Sep 2022	09-10 Sep 2022
16:00 - 17:00	48.9	51.1	46.3	48.8	48.6	49.7	47.2
17:00 - 18:00	47.3	47.7	47.4	47.8	47.8	49.4	48.7
18:00 - 19:00	44.6	48.5	32.1	46.9	46.9	46.4	50.5
19:00 - 20:00	45.1	45.7	46.8	46.5	46.7	45.6	50.3
20:00 - 21:00	44.6	46.8	48.7	45.2	48.7	46.8	44.7
21:00 - 22:00	46.2	44.4	44.5	43.8	50.6	46.0	43.1
22:00 - 23:00	44.5	51.5	44.3	44.0	49.6	44.1	44.5
23:00 - 00:00	48.5	49.9	42.8	43.7	50.1	42.4	41.4
00:00 - 01:00	51.0	46.3	41.9	43.3	48.6	41.9	41.6
01:00 - 02:00	45.3	48.3	42.7	43.2	47.5	42.4	42.0
02:00 - 03:00	49.8	46.5	45.2	42.6	47.2	42.2	43.0
03:00 - 04:00	49.7	45.2	45.6	57.0	47.3	43.4	42.3
04:00 - 05:00	48.0	44.1	46.2	56.6	46.2	43.6	45.9
05:00 - 06:00	50.2	47.2	47.8	50.4	47.9	46.5	47.0
06:00 - 07:00	56.7	48.3	47.4	51.2	47.6	48.5	48.2
07:00 - 08:00	65.7	49.2	48.3	53.3	49.1	47.9	47.0
08:00 - 09:00	48.8	46.9	46.5	51.3	46.2	45.3	45.3
09:00 - 10:00	48.2	46.3	44.4	46.1	48.2	45.6	46.4
10:00 - 11:00	46.6	43.8	42.7	47.2	48.7	45.4	45.0
11:00 - 12:00	48.6	44.4	45.4	48.6	47.0	46.3	46.1
12:00 - 13:00	44.5	44.6	54.0	46.4	46.4	45.1	44.5
13:00 - 14:00	46.2	56.7	51.2	47.2	46.1	45.1	44.8
14:00 - 15:00	45.3	56.5	45.3	46.8	46.2	43.6	43.8
15:00 - 16:00	46.4	53.8	46.2	46.5	47.8	43.6	44.3
Leq(24)*	53.6	49.9	47.5	49.9	47.9	45.8	46.1
L _{dn}	58.0	55.0	52.3	57.7	54.6	51.2	51.4
L _{max} **	96.0	76.0	67.2	70.6	69.8	71.1	70.5
Standard-24Hr	70 dB(A)						
Standard-Max	115 dB(A)						

Remark : * Average time between 16:00-16:00

** Maximum Sound Pressure Level between 16:00-16:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team



Noise Monitoring Result : Background Noise MTR-BEE

Location : Takuan - Ao Pradu		Monitor Period : 03-10 Sep 2022					
SLM Model : RION NL-21		Serial No : 00187481					
Site Operator : Mr. Siwanon Kulawong							
Calibrator Model : RION NC-74		Serial No : 34283648					
Calibration Ref dB(A) : 94.0		Certified Date : 24 Dec 2021					
SLM Reading / Adjust dB(A) : 93.9/0.1		Expire Date : 23 Dec 2022					
Cal Sheet No.: NC-74-2022-079							
Time	L90 (dB(A))						
	03-04 Sep 2022	04-05 Sep 2022	05-06 Sep 2022	06-07 Sep 2022	07-08 Sep 2022	08-09 Sep 2022	09-10 Sep 2022
16:00 - 17:00	40.7	40.4	39.9	43.5	42.3	43.0	41.0
17:00 - 18:00	40.2	40.4	41.2	41.7	41.4	42.9	43.5
18:00 - 19:00	37.9	41.5	43.1	41.4	41.9	40.3	43.8
19:00 - 20:00	41.8	43.1	43.8	43.8	43.6	42.7	43.8
20:00 - 21:00	41.3	43.3	43.7	42.4	46.4	44.6	41.3
21:00 - 22:00	44.0	42.7	42.9	42.3	48.6	43.0	41.0
22:00 - 23:00	41.1	43.7	43.3	41.6	48.3	41.1	39.8
23:00 - 00:00	40.5	45.8	40.7	42.4	49.0	40.6	39.8
00:00 - 01:00	41.0	44.8	40.4	41.5	47.4	40.3	39.9
01:00 - 02:00	41.5	44.8	41.7	40.6	46.5	41.4	40.1
02:00 - 03:00	44.0	43.6	42.8	41.0	46.2	40.1	40.6
03:00 - 04:00	48.3	42.8	43.2	42.3	45.8	41.3	39.8
04:00 - 05:00	46.1	40.6	44.2	49.4	43.9	41.2	42.5
05:00 - 06:00	46.2	40.6	43.7	47.7	42.6	40.4	41.0
06:00 - 07:00	44.3	40.0	42.4	46.7	42.2	42.3	41.0
07:00 - 08:00	48.0	41.3	42.4	49.6	42.4	40.7	39.8
08:00 - 09:00	45.5	40.3	41.9	45.9	41.3	39.7	40.6
09:00 - 10:00	43.3	40.1	38.9	43.4	41.0	40.5	41.0
10:00 - 11:00	40.1	38.5	34.9	42.3	42.3	40.9	41.3
11:00 - 12:00	39.8	37.0	38.9	41.3	42.9	41.3	40.2
12:00 - 13:00	38.5	36.0	38.5	41.2	42.9	40.2	35.5
13:00 - 14:00	39.3	38.4	43.3	43.3	42.5	40.1	36.7
14:00 - 15:00	40.5	37.7	39.2	41.9	42.6	35.8	37.2
15:00 - 16:00	40.1	39.5	41.5	41.5	42.1	37.3	36.4
L90(avg)*	43.3	41.9	42.0	44.2	44.8	41.2	40.8

Remark : * Average time between 16:00-16:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

Preeda S.
(Miss Preeda Somjai)
Technical Management Team

ภาคผนวก ง.2-5

ผลการตรวจวัดคุณภาพน้ำทิ้ง



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 1426/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 05/07/2022	SAMPLING TIME	: 11.4
RECEIVED DATE	: 06/07/2022	ANALYTICAL DATE	: 06-12/07/2022
REPORT DATE	: 12/07/2022	SITE OPERATOR	: Mr. Siwanon Kulawong
SAMPLE CONDITION	: Normal	FILE CODE	: 222028_WW_July

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Treated Waste Water : Gutter	STANDARD ^{1/}
Flow Rate	m ³ /hr			18.1	
Temperature	°C	2550 B	< 0.5	35.4	≤ 40
pH		4500-H B	< 0.10	7.69	5.5-9.0
Color (Original pH)	ADMI	2120 F	< 5.0	17.6	≤ 300
Color (pH 7.0)	ADMI	2120 F	< 5.0	17.8	≤ 300
Total Dissolved Solids	mg/l	2540 C	< 50	483	≤ 3,000
Total Suspended Solids	mg/l	2540 D	< 2.5	5	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 0.5	ND	≤ 5
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.3	
BOD ₅	mg/l	5210 B	< 1.0	2.2	≤ 20
COD	mg/l	5220 C	< 15.00	< 15.00	≤ 120
Toluene	mg/l	5030 C / 8260 D	< 0.0002	ND	
Styrene	mg/l	5030 C / 8260 D	< 0.0002	ND	

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 19TH ED. 2017 (AWWA, APHA, WEF)

REFERENCE: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY SW-846 1ST EDITION 2000

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 9-239-n-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 9-239-n-5863

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

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

3. ^{1/} Notification of the Ministry of Industry, B.E.2560 (2017) and

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

4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 1584/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 04/08/2022	SAMPLING TIME	: 14.16
RECEIVED DATE	: 05/08/2022	ANALYTICAL DATE	: 05-11/08/2022
REPORT DATE	: 15/08/2022	SITE OPERATOR	: Mr. Siwanon Kulawong
SAMPLE CONDITION	: Normal	FILE CODE	: 222028_WW_August

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION Treated Waste Water : Gutter	STANDARD ^{1/}
Flow Rate	m ³ /hr			13.5	
Temperature	°C	2550 B	< 0.5	37.0	≤ 40
pH		4500-H B	< 0.10	7.66	5.5-9.0
Color (Original pH)	ADMI	2120 F	< 5.0	17.6	≤ 300
Color (pH 7.0)	ADMI	2120 F	< 5.0	18.5	≤ 300
Total Dissolved Solids	mg/l	2540 C	< 50	459	< 3,000
Total Suspended Solids	mg/l	2540 D	< 2.5	15	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 0.5	ND	≤ 5
Dissolved Oxygen	mg/l	4500-O G	< 0.1	4.9	
BOD ₅	mg/l	5210 B	< 1.0	3.1	< 20
COD	mg/l	5220 C	< 15.00	34.31	≤ 120
Toluene	mg/l	5030 C / 8260 D	< 0.0002	ND	
Styrene	mg/l	5030 C / 8260 D	< 0.0002	ND	

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 19TH ED. 2017 (AWWA, APHA, WEF)

REFERENCE: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY SW-846 1ST EDITION 2000

Khemchuda Insorn

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Analyst

REG. NO. 9-239-n-5976

Araya Tipparuk

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 9-239-n-5863

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4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 1789/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 02/09/2022	SAMPLING TIME	: 14.00
RECEIVED DATE	: 03/09/2022	ANALYTICAL DATE	: 03-09/09/2022
REPORT DATE	: 09/09/2022	SITE OPERATOR	: Mr. Siwanon Kulawong
SAMPLE CONDITION	: Normal	FILE CODE	: 222028_WW_September

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ¹⁾
		METHODS	(non-detectable)	Treated Waste Water : Gutter	
Flow Rate	m ³ /hr	-	-	57.2	-
Temperature	°C	2550 B	< 0.5	36.7	≤ 40
pH	-	4500-H' B	< 0.10	6.85	5.5-9.0
Color (Original pH)	ADMI	2120 F	< 5.0	18.8	≤ 300
Color (pH 7.0)	ADMI	2120 F	< 5.0	17.9	≤ 300
Total Dissolved Solids	mg/l	2540 C	< 50	564	≤ 3,000
Total Suspended Solids	mg/l	2540 D	< 2.5	13	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 0.5	ND	≤ 5
Dissolved Oxygen	mg/l	4500-O G	< 0.1	5.2	-
BOD ₅	mg/l	5210 B	< 1.0	< 1.0	≤ 20
COD	mg/l	5220 C	< 15.00	52.74	≤ 120
Toluene	mg/l	5030 C / 8260 D	< 0.0002	ND	-
Styrene	mg/l	5030 C / 8260 D	< 0.0002	ND	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 19th EDITION, APHA, WEF

REFERENCE : UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, SW-846, 3rd EDITION, 2008

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 1-239-ก-5976

M. Araya Tipparak

(Mrs. Araya Tipparak)

Technical Management Team

REG. NO. 1-239-ก-5863

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4. - Not available.



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WATER AND WASTEWATER ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No.	: 2548/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Grab
SAMPLING DATE	: 26/12/2022	SAMPLING TIME	: 14.00
RECEIVED DATE	: 27/12/2022	ANALYTICAL DATE	: 27/12/2022-03/01/2023
REPORT DATE	: 05/01/2023	SITE OPERATOR	: Mr. Siwanon Kulawong
SAMPLE CONDITION	: Normal	FILE CODE	: 222028_WW_December

PARAMETER	UNIT	ANALYSIS	ND	STATION	STANDARD ¹⁾
		METHODS	(non-detectable)	Treated Waste Water : Gutter	
Flow Rate	m ³ /hr	-	-	33.9	-
Temperature	°C	2550 B	< 0.5	31.5	≤ 40
pH	-	4500-H' B	< 0.10	7.63	5.5-9.0
Color (Original pH)	ADMI	2120 F	< 5.0	19.2	≤ 300
Color (pH 7.0)	ADMI	2120 F	< 5.0	19.1	≤ 300
Total Dissolved Solids	mg/l	2540 C	< 50	392	≤ 3,000
Total Suspended Solids	mg/l	2540 D	< 2.5	16	≤ 50
Fat Oil & Grease	mg/l	5520 B	< 0.5	ND	≤ 5
Dissolved Oxygen	mg/l	4500-O G	< 0.1	6.3	-
BOD ₅	mg/l	5210 B	< 1.0	1.5	≤ 20
COD	mg/l	5220 C	< 15.00	40.83	≤ 120
Toluene	mg/l	5030 C / 8260 D	< 0.0002	ND	-
Styrene	mg/l	5030 C / 8260 D	< 0.0002	ND	-

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 19th EDITION, APHA, WEF

REFERENCE : UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, SW-846, 3rd EDITION, 2008

Khemchuda Insorn

(Miss Khemchuda Insorn)

Analyst

REG. NO. 1-239-ก-5976

M. Araya Tipparak

(Mrs. Araya Tipparak)

Technical Management Team

REG. NO. 1-239-ก-5863

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4. - Not available.

ภาคผนวก ง.2-6

ผลการตรวจวัดคุณภาพน้ำใต้ดิน



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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No	: 2229/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING DATE	: 04/11/2022	SAMPLING TIME	: 12:07-12:10
RECEIVED DATE	: 05/11/2022	ANALYTICAL DATE	: 04.11-15/11/2022
REPORT DATE	: 16/11/2022	SITE OPERATOR	: Mr. Watcharan Pramakhat
SAMPLE CONDITION	: Normal	FILE CODE	: 222028_GW_November

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION ซากเรณูกับหินที่ทางฝั่งตะวันตก	STANDARD ^U
pH	-	4500-H ⁺ B	≤ 0.10	5.95	6.5 - 9.2
Styrene	mg/l	6200 B	< 0.0002	ND	≤ 24
Toluene	mg/l	6200 B	< 0.0002	ND	≤ 5.0
Total Petroleum Hydrocarbons					
- TPH (C ₆ - C ₁₀)	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C ₁₁ - C ₁₄)	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C ₁₅ - C ₂₁)	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Pentatriacontane					
- n-Tetraatriacontane					
- Pentatriacontane					

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 19th EDITION, APHA, 1995

REFERENCE: UK SPA 816 ANALYSIS METHODS FOR EVALUATING WATER AND SOLID WASTE, 1st ED, 2005

Natsiri L.
(Miss Natsiri Lertterapipat)
Analyst

REG. NO. 2-239-R-0001

(Mrs. Araya Tipparuk)
Technical Management Team

REG. NO. 2-239-R-5863

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3. ^U Notification of the Ministry of Industry, H.E.2559 (2016).



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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No	: 2229/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING DATE	: 04/11/2022	SAMPLING TIME	: 12:07-12:10
RECEIVED DATE	: 05/11/2022	ANALYTICAL DATE	: 11/11/2022
REPORT DATE	: 16/11/2022	SITE OPERATOR	: Mr. Watcharan Pramakhat
SAMPLE CONDITION	: Normal	FILE CODE	: 222028_GW_November

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION ซากเรณูกับหินที่ทางฝั่งตะวันตก	STANDARD
1,3-Butadiene	mg/l	5030 C / 8260 D	< 0.0005	ND	
Cyclohexane	mg/l	5030 C / 8260 D	< 0.0005	ND	
n-Heptane	mg/l	5030 C / 8260 D	< 0.50	ND	

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER, 19th EDITION, APHA, 1995

Natsiri L.
(Miss Natsiri Lertterapipat)
Analyst

(Mrs. Araya Tipparuk)
Technical Management Team

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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No	: 2229/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING DATE	: 04/11/2022	SAMPLING TIME	: 11:35-11:39
RECEIVED DATE	: 05/11/2022	ANALYTICAL DATE	: 04, 11-15/11/2022
REPORT DATE	: 16/11/2022	SITE OPERATOR	: Mr. Watcharakon Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 222028_GW_November

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION หน่วยที่ตรวจพบ	STANDARD ¹⁾
pH		4500-H B	< 0.10	S.05	6.5 - 9.2
Styrene	mg/l	6200 B	< 0.0002	ND	≤ 24
Toluene	mg/l	6200 B	< 0.0002	ND	< 5.0
Total Petroleum Hydrocarbons					
- TPH (C ₇ - C ₉)	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C ₁₀ - C ₁₄)	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C ₁₅ - C ₂₅)	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- n-Pentacosane					

REFERENCE: STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 19th ED. 2011 (APHA, AWWA, WEF)

REFERENCE: USEPA SW-846 TEST METHOD SET FOR EVALUATING WATER AND SOLID WASTE 3rd ED. 2005

Natsiri L.

(Miss Natsiri Lertherapipat)

Analyst

REG. NO. 2-239-ก-0001

(Mrs. Araya Tippanik)

Technical Management Team

REG. NO. 2-239-ก-5863

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3. Notification of the Ministry of Industry, B.E. 2559 (2016)



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GROUND WATER ANALYSIS REPORT

CLIENT NAME	: BST ENEOS Elastomer Co., Ltd. (BEE)	REQUEST SERVICE No	: 2229/65
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Pneumatic Bladder Pump
SAMPLING DATE	: 04/11/2022	SAMPLING TIME	: 11:35-11:39
RECEIVED DATE	: 05/11/2022	ANALYTICAL DATE	: 11/11/2022
REPORT DATE	: 16/11/2022	SITE OPERATOR	: Mr. Watcharakon Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 222028_GW_November

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION หน่วยที่ตรวจพบ	STANDARD
1,3-Butadiene	mg/l	5030 C / 8260 D	< 0.0005	ND	
Cyclohexene	mg/l	5030 C / 8260 D	< 0.0005	ND	
n-Heptane	mg/l	5030 C / 8260 D	< 0.50	ND	

REFERENCE: USEPA SW-846 TEST METHOD SET FOR EVALUATING WATER AND SOLID WASTE 3rd ED. 2005

Natsiri L.

(Miss Natsiri Lertherapipat)

Analyst

(Mrs. Araya Tippanik)

Technical Management Team

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GROUND WATER ANALYSIS REPORT

CLIENT NAME : BST ENEOS Elastomer Co., Ltd. (BEE) REQUEST SERVICE No : 2229/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Pneumatic Bladder Pump
SAMPLING DATE : 04/11/2022 SAMPLING TIME : 11:07-11:11
RECEIVED DATE : 05/11/2022 ANALYTICAL DATE : 04, 11-15/11/2022
REPORT DATE : 16/11/2022 SITE OPERATOR : Mr. Watcharakorn Pramkhae
SAMPLE CONDITION : Normal FILE CODE : 222028_GW_November

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION อากาศในดินบริเวณนี้	STANDARD ^u
pH	-	4500-H ⁺ B	< 0.10	5.35	6.5 - 9.2
Styrene	mg/l	6200 B	< 0.0002	ND	≤ 24
Toluene	mg/l	6200 B	< 0.0002	ND	≤ 5.0
Total Petroleum Hydrocarbons					
- TPH1 (C ₁ - C ₉)	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C ₁₀ - C ₁₆)	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C ₁₈ - C ₂₅)	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Tetracontane					
- n-Pentacosane					

REFERENCE : STANDARD METHOD FOR EXAMINATION OF WATER AND WASTEWATER 2nd ED. (HJ/T 84-2001, GB 3838-2002)

REFERENCE : USE EPA SW-846 TEST METHOD FOR EVALUATING WATER AND SOLID WASTE 2nd ED. 2002

Natsiri L.

(Miss Natsiri Lertrapiwat)

Analyst

REG. NO. 2-239-n-0001

(Mrs. Araya Tipparak)

Technical Management Team

REG. NO. 2-239-n-5863



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GROUND WATER ANALYSIS REPORT

CLIENT NAME : BST ENEOS Elastomer Co., Ltd. (BEE) REQUEST SERVICE No : 2229/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Pneumatic Bladder Pump
SAMPLING DATE : 04/11/2022 SAMPLING TIME : 11:07-11:11
RECEIVED DATE : 05/11/2022 ANALYTICAL DATE : 11/11/2022
REPORT DATE : 16/11/2022 SITE OPERATOR : Mr. Watcharakorn Pramkhae
SAMPLE CONDITION : Normal FILE CODE : 222028_GW_November

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION อากาศในดินบริเวณนี้	STANDARD
1,3-Butadiene	mg/l	5030 C / 8260 D	< 0.0005	ND	
Cyclohexane	mg/l	5030 C / 8260 D	< 0.0005	ND	
n-Heptane	mg/l	5030 C / 8260 D	< 0.50	ND	

REFERENCE : USE EPA SW-846 TEST METHOD FOR EVALUATING WATER AND SOLID WASTE 2nd ED. 2002

Natsiri L.

(Miss Natsiri Lertrapiwat)

Analyst

(Mrs. Araya Tipparak)

Technical Management Team

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

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3. ^u Notification of the Ministry of Industry, B.E.2559 (2016).



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GROUND WATER ANALYSIS REPORT

CLIENT NAME : BST ENEOS Elastomer Co., Ltd. (BEE) REQUEST SERVICE No : 2229/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Pneumatic Bladder Pump
SAMPLING DATE : 04/11/2022 SAMPLING TIME : 10:37-10:45
RECEIVED DATE : 05/11/2022 ANALYTICAL DATE : 04_11-15/11/2022
REPORT DATE : 16/11/2022 SITE OPERATOR : Mr. Wacharakran Pramakhate
SAMPLE CONDITION : Normal FILE CODE : 222028_GW_November

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION บริเวณระบบบำบัดน้ำเสีย	STANDARD ^u
pH		4500-11 ^B	< 0.10	6.06	6.5 - 9.2
Styrene	mg/l	6200 B	< 0.0002	ND	≤ 24
Toluene	mg/l	6200 B	< 0.0002	ND	≤ 5.0
Total Petroleum Hydrocarbons					
- TPH (C ₆ - C ₁₀)	mg/l	5030 C / 8260 D	< 0.003	ND	≤ 1.4
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C ₈ - C ₁₆)	mg/l	3510 C / 8015 D	< 0.025	ND	≤ 1.7
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C ₁₆ - C ₂₂)	mg/l	3510 C / 8015 D	< 0.050	ND	≤ 0.1
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Pentacosane					
- n-Heptacosane					
- n-Nonacosane					
- n-Htriacontane					
- n-Pentatriacontane					

REFERENCE : STANDARD METHODS FOR EXAMINATION OF WATER AND WASTEWATER 22nd ED 2012 AMERICAN APHA. INC.

REFERENCE : US EPA SW-846 TEST METHODS FOR EXAMINING WATER AND SOLID WASTE 7th ED 2012

Natsiri L.

(Miss Natsiri Lerterapipat)

Analyst

REG. NO. 3-239-ก 0001

M R

(Mrs. Ariya Tipparuk)

Technical Management Team

REG. NO. 3-239-ก 5863

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GROUND WATER ANALYSIS REPORT

CLIENT NAME : BST ENEOS Elastomer Co., Ltd. (BEE) REQUEST SERVICE No : 2229/65
SAMPLING BY : SECOT Co., Ltd. SAMPLING METHOD : Pneumatic Bladder Pump
SAMPLING DATE : 04/11/2022 SAMPLING TIME : 10:37-10:45
RECEIVED DATE : 05/11/2022 ANALYTICAL DATE : 11/11/2022
REPORT DATE : 16/11/2022 SITE OPERATOR : Mr. Wacharakran Pramakhate
SAMPLE CONDITION : Normal FILE CODE : 222028_GW_November

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION บริเวณระบบบำบัดน้ำเสีย	STANDARD
1,3-Butadiene	mg/l	5030 C / 8260 D	< 0.0005	ND	*
Cyclohexane	mg/l	5030 C / 8260 D	< 0.0005	ND	*
n-Heptane	mg/l	5030 C / 8260 D	< 0.50	ND	*

REFERENCE : USEPA SW-846 TEST METHODS FOR EXAMINING WATER AND SOLID WASTE 7th ED 2012

Natsiri L.

(Miss Natsiri Lerterapipat)

Analyst

M R

(Mrs. Ariya Tipparuk)

Technical Management Team

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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: JSR BST Elastomer Co., Ltd. (JBE)	REQUEST SERVICE No.	: 1404/64
SAMPLING BY	: SISCOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 28/06/2021	SAMPLING TIME	: 11.30-11.36
RECEIVED DATE	: 30/06/2021	ANALYTICAL DATE	: 30/06/2021, 08/07/2021
REPORT DATE	: 14/07/2021	SITE OPERATOR	: Mr. Wacharakorn Pramkhatat
SAMPLE CONDITION	: Normal	FILE CODE	: 221028_Soil_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION	STANDARD
				สถานีประมงน้ำจืดจันทบุรี	
pH		9045 D	< 0.10	7.99	6
1,3-Butadiene	mg/kg	5035 A / 8260 D	< 0.001	ND	6
Cyclohexane	mg/kg	5035 A / 8260 D	< 0.001	ND	6
n-Heptane	mg/kg	5035 A / 8260 D	< 0.50	ND	6

REFERENCES: USEPA'S SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 1ST ED., 1989.

Natsiri L.

(Miss Natsiri Lertterapipat)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: JSR BST Elastomer Co., Ltd. (JBE)	REQUEST SERVICE No	: 1404/64
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 28/06/2021	SAMPLING TIME	: 11.30-11.36
RECEIVED DATE	: 30/06/2021	ANALYTICAL DATE	: 30/06/2021-08/07/2021
REPORT DATE	: 14/07/2021	SITE OPERATOR	: Mr. Watcharakorn Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 221028 Soil June

[illegible]EPA/600/R-92/049a TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 3RD ED. 1992.

Natsiri L

(Miss Natsiri Lertrapiwat)

Analyst

REG. NO. 1-239-1-6423

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-П-5863

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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: JSR BST Elastomer Co., Ltd. (JBK)	REQUEST SERVICE No	: 1404/64
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 29/06/2021	SAMPLING TIME	: 10.52-11.10
RECEIVED DATE	: 30/06/2021	ANALYTICAL DATE	: 30/06/2021-08/07/2021
REPORT DATE	: 14/07/2021	SITE OPERATOR	: Mr. Watcharakon Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 221028_Soil_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION หน่วยที่ ๓๖๖๖๖๖๖๖	STANDARD
pH		9045 D	< 0.10	8.07	*
1,3-Butadiene	mg/kg	5035 A / 8260 D	< 0.001	ND	*
Cyclohexane	mg/kg	5035 A / 8260 D	< 0.001	ND	*
n-Heptane	mg/kg	5035 A / 8260 D	< 0.50	ND	*

REFERENCE: USE EPA 8160 TEST METHOD FOR EVALUATING WATER AND SOIL WASTE 7th ED. 2001

Natsiri L.

(Miss Natsiri Lerterapipat)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: JSR BST Elastomer Co., Ltd. (JBK)	REQUEST SERVICE No	: 1404/64
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 29/06/2021	SAMPLING TIME	: 10.52-11.10
RECEIVED DATE	: 30/06/2021	ANALYTICAL DATE	: 30/06/2021-08/07/2021
REPORT DATE	: 14/07/2021	SITE OPERATOR	: Mr. Watcharakon Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 221028_Soil_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION หน่วยที่ ๓๖๖๖๖๖๖๖	STANDARD ^{1/}
Styrene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 1,700
Toluene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 520
Total Petroleum Hydrocarbons					
TPH (C ₁ - C ₁₂)	mg/kg	5035 A / 8260 D	< 0.003	ND	≤ 25
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
TPH (C ₁₃ - C ₁₈)	mg/kg	3540 C / 8015 D	< 0.25	ND	≤ 25
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
TPH (C ₁₉ - C ₂₅)	mg/kg	3540 C / 8015 D	< 1.85	ND	≤ 8.0
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetracontane					
- n-Pentatriacontane					

REFERENCE: USE EPA 8160 TEST METHOD FOR EVALUATING WATER AND SOIL WASTE 7th ED. 2001

Natsiri L.

(Miss Natsiri Lerterapipat)

Analyst

REG. NO. 2-239-8-6423

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 2-239-8-5863

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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: JSR BST Elastomer Co., Ltd. (JBE)	REQUEST SERVICE No	: 1404/64
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 29/06/2021	SAMPLING TIME	: 10.10-10.17
RECEIVED DATE	: 30/06/2021	ANALYTICAL DATE	: 30/06/2021-08/07/2021
REPORT DATE	: 14/07/2021	SITE OPERATOR	: Mr. Watcharakon Pramukhae
SAMPLE CONDITION	: Normal	FILE CODE	: 221028_Soil_Juice

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION ภาควิชาสิ่งแวดล้อม	STANDARD
pH	-	9045 D	< 0.10	7.90	*
1,3-Butadiene	mg/kg	5035 A / 8260 D	< 0.001	ND	*
Cyclohexane	mg/kg	5035 A / 8260 D	< 0.001	ND	*
n-Heptane	mg/kg	5035 A / 8260 D	< 0.50	ND	*

REFERENCE: USE EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 7th ED., 2004.

Natsiri L.

(Miss Natsiri Leritrapipat)

Analyst

(Mrs. Araya Tipparak)

Technical Management Team

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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: JSR BST Elastomer Co., Ltd. (JBE)	REQUEST SERVICE No	: 1404/64
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 29/06/2021	SAMPLING TIME	: 10.10-10.17
RECEIVED DATE	: 30/06/2021	ANALYTICAL DATE	: 30/06/2021-08/07/2021
REPORT DATE	: 14/07/2021	SITE OPERATOR	: Mr. Watcharakon Pramukhae
SAMPLE CONDITION	: Normal	FILE CODE	: 221028_Soil_Juice

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION ภาควิชาสิ่งแวดล้อม	STANDARD ¹⁾
Styrene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 1,700
Toluene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 520
Total Petroleum Hydrocarbon					
- TPH (C ₇ - C ₉)	mg/kg	5035 A / 8260 D	< 0.003	ND	≤ 25
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C ₁₀ - C ₁₄)	mg/kg	3540 C / 8015 D	< 0.25	ND	≤ 25
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C ₁₅ - C ₁₉)	mg/kg	3540 C / 8015 D	< 1.85	ND	≤ 8.0
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Tetracontane					
- n-Tetracontane					
- n-Pentatriacontane					
- n-Pentatriacontane					

REFERENCE: USE EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 7th ED., 2004.

REFERENCE: USE EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOLID WASTE, 7th ED., 2004.

Natsiri L.

(Miss Natsiri Leritrapipat)

Analyst

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Technical Management Team

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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: JSR BST Elastomer Co., Ltd. (JBH)	REQUEST SERVICE No.	: 1404/64
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 29/06/2021	SAMPLING TIME	: 09.30-09.39
RECEIVED DATE	: 30/06/2021	ANALYTICAL DATE	: 30/06/2021-08/07/2021
REPORT DATE	: 14/07/2021	SITE OPERATOR	: Mr. Watcharakon Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 221028_Soil_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION (บริเวณระบบบำบัดน้ำเสีย)	STANDARD
pH	-	9045 D	< 0.10	7.76	-
1,1-Dichloroethene	mg/kg	5035 A / 8260 D	< 0.001	ND	-
Cyclohexane	mg/kg	5035 A / 8260 D	< 0.001	ND	-
n-Heptane	mg/kg	5035 A / 8260 D	< 0.50	ND	-

REFERENCE: USE EPA 816 TEST METHODS FOR EVALUATING WATER AND SOIL WASTE. 1st ed. 2002

Natsiri L.

(Miss Natsiri Lertterapipat)

Analyst

(Mrs. Araya Tipparak)

Technical Management Team

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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: JSR BST Elastomer Co., Ltd. (UBE)	REQUEST SERVICE No.	: 1404/64
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 29/06/2021	SAMPLING TIME	: 09.30-09.39
RECEIVED DATE	: 30/06/2021	ANALYTICAL DATE	: 30/06/2021-08/07/2021
REPORT DATE	: 14/07/2021	SITE OPERATOR	: Mr. Watcharakon Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 221028_Soil_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION (บริเวณระบบบำบัดน้ำเสีย)	STANDARD ¹⁾
Styrene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 1,700
Toluene	mg/kg	5035 A / 8260 D	< 0.00025	ND	≤ 520
Total Petroleum Hydrocarbons					
- TPH (C ₇ - C ₁₀)	mg/kg	5035 A / 8260 D	< 0.003	ND	< 25
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C ₇₋₁₀ C ₁₆)	mg/kg	3540 C / 8015 D	< 0.25	ND	≤ 25
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C ₇₋₁₆ C ₁₉)	mg/kg	3540 C / 8015 D	< 1.85	ND	≤ 8.0
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetratriacontane					
- Pentatriacontane					

REFERENCE: USE EPA 816 TEST METHODS FOR EVALUATING WATER AND SOIL WASTE. 1st ed. 2002

Natsiri L.

(Miss Natsiri Lertterapipat)

Analyst

REG. NO. 7-239-a-6423

(Mrs. Araya Tipparak)

Technical Management Team

REG. NO. 7-239-b-5863

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3: ¹⁾ Notification of the Ministry of Industry, B.E.2559 (2016).



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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: JSR BST Elastomer Co., Ltd. (JBE)	REQUEST SERVICE No	: 1404/64
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 28/06/2021	SAMPLING TIME	: 10.45-10.52
RECEIVED DATE	: 30/06/2021	ANALYTICAL DATE	: 30/06/2021-08/07/2021
REPORT DATE	: 14/07/2021	SITE OPERATOR	: Mr. Watcharakon Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 221028_Soil_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION อาคารห้องปฏิบัติการวิเคราะห์	STANDARD
pH	-	9045 D	< 0.10	7.67	-
1,3-Butadiene	mg/kg	5035 A / 8260 D	< 0.001	ND	-
Cyclohexane	mg/kg	5035 A / 8260 D	< 0.001	ND	-
n-Heptane	mg/kg	5035 A / 8260 D	< 0.50	ND	-

REFERENCE: US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOIL WASTE, 1st ED. 2002.

Natsiri L.

(Miss Natsiri Lerttarpipat)

Analyst

(Mrs. Araya Tipparuk)

Technical Management Team

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SOIL SAMPLES ANALYSIS REPORT

CLIENT NAME	: JSR BST Elastomer Co., Ltd. (JBE)	REQUEST SERVICE No	: 1404/64
SAMPLING BY	: SECOT Co., Ltd.	SAMPLING METHOD	: Hand Auger
SAMPLING DATE	: 28/06/2021	SAMPLING TIME	: 10.45-10.52
RECEIVED DATE	: 30/06/2021	ANALYTICAL DATE	: 30/06/2021-08/07/2021
REPORT DATE	: 14/07/2021	SITE OPERATOR	: Mr. Watcharakon Pramakhate
SAMPLE CONDITION	: Normal	FILE CODE	: 221028_Soil_June

PARAMETER	UNIT	ANALYSIS METHODS	ND (non-detectable)	STATION อาคารห้องปฏิบัติการวิเคราะห์	STANDARD ¹⁾
Styrene	mg/kg	5035 A / 8260 D	< 0.0025	ND	< 1,700
Toluene	mg/kg	5035 A / 8260 D	< 0.0025	ND	≤ 520
Total Petroleum Hydrocarbons					
- TPH (C ₇ - C ₁₂)	mg/kg	5035 A / 8260 D	< 0.003	ND	≤ 25
- Pentane					
- Benzene					
- Toluene					
- m,p-Xylene					
- o-Xylene					
- Ethylbenzene					
- TPH (C ₇₋₉ - C ₁₄)	mg/kg	3540 C / 8015 D	< 0.25	ND	≤ 25
- n-Nonane					
- n-Decane					
- n-Dodecane					
- n-Tetradecane					
- n-Hexadecane					
- TPH (C ₁₀ - C ₁₉)	mg/kg	3540 C / 8015 D	< 1.85	ND	≤ 8.0
- n-Octadecane					
- n-Eicosane					
- n-Docosane					
- n-Tetracosane					
- n-Hexacosane					
- n-Octacosane					
- n-Triacontane					
- n-Dotriacontane					
- n-Tetratriacontane					
- Pentatriacontane					

REFERENCE: US EPA SW-846 TEST METHODS FOR EVALUATING WATER AND SOIL WASTE, 1st ED. 2002.

Natsiri L.

(Miss Natsiri Lerttarpipat)

Analyst

REG. NO. 7-239-9-6423

(Mrs. Araya Tipparuk)

Technical Management Team

REG. NO. 7-239-9-5863

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ภาคผนวก ง.2-8

ผลการตรวจวัดคุณภาพอากาศภายในสถานประกอบการ

คุณภาพอากาศภายในสถานประกอบการแบบติดตั้งกับพื้นที่



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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0082/66
For	: BST ENEOS Elastomer Co., Ltd. (BEE)	Sampling Date	: 17/01/2023
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 20/01/2023
		Test Date	: 23/01/2023
Tel/Fax	: 038-9492113	Report Date	: 27/01/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
Finishing phase I	17/01/2023 08:21-14:21	Tetrahydrofuran	NIOSH 1609/GC FID	< 0.01	ND	200
		Cyclohexane	NIOSH 1500/GC FID	< 0.01	35.73	300
		1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
		n-Heptane	NIOSH 1500/GC FID	< 0.01	8.04	500
		Styrene	NIOSH 1501/GC FID	< 0.01	ND	100
		Toluene	NIOSH 1501/GC FID	< 0.02	0.83	200
Finishing phase II	17/01/2023 08:23-14:23	Tetrahydrofuran	NIOSH 1609/GC FID	< 0.01	ND	200
		Cyclohexane	NIOSH 1500/GC FID	< 0.01	0.52	300
		1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
		n-Heptane	NIOSH 1500/GC FID	< 0.01	0.10	500
		Styrene	NIOSH 1501/GC FID	< 0.01	ND	100
		Toluene	NIOSH 1501/GC FID	< 0.02	ND	200

Analyst By: Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By: Na-Na Poo-was-an-petch
(Miss Narisa Poo-was-an-petch)
Technical Management Team

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 0082/66
For	: BST ENEOS Elastomer Co., Ltd. (BEE)	Sampling Date	: 17/01/2023
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 20/01/2023
		Test Date	: 23/01/2023
Tel/Fax	: 038-9492113	Report Date	: 27/01/2023

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
Solvent Purification phase I	17/01/2023 08:18-14:18	Cyclohexane	NIOSH 1500/GC FID	< 0.01	0.69	300
		1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
		n-Heptane	NIOSH 1500/GC FID	< 0.01	ND	500
Solvent Purification phase II	17/01/2023 08:14-14:14	Cyclohexane	NIOSH 1500/GC FID	< 0.01	0.22	300
		1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
		n-Heptane	NIOSH 1500/GC FID	< 0.01	ND	500

Analyst By: Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By: Na-Na Poo-was-an-petch
(Miss Narisa Poo-was-an-petch)
Technical Management Team

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 1906/55
For	: BST ENEOS Elastomer Co., Ltd. (BEE)	Sampling Date	: 13/09/2022
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 19/09/2022
		Test Date	: 22/09/2022
Tel/Fax	: 038-949200	Report Date	: 28/09/2022

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
Finishing phase I	13/09/2022 09:40-15:40	Tetrahydrofuran	NIOSH 1609/GC FID	< 0.01	ND	200
		Cyclohexane	NIOSH 1500/GC FID	< 0.01	ND	300
		1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
		n-Heptane	NIOSH 1500/GC FID	< 0.01	ND	500
		Styrene	NIOSH 1501/GC FID	< 0.01	ND	100
		Toluene	NIOSH 1501/GC FID	< 0.02	ND	200
Finishing phase II	13/09/2022 09:55-15:55	Tetrahydrofuran	NIOSH 1609/GC FID	< 0.01	ND	200
		Cyclohexane	NIOSH 1500/GC FID	< 0.01	1.90	300
		1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
		n-Heptane	NIOSH 1500/GC FID	< 0.01	0.19	500
		Styrene	NIOSH 1501/GC FID	< 0.01	ND	100
		Toluene	NIOSH 1501/GC FID	< 0.02	0.11	200



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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 1906/55
For	: BST ENEOS Elastomer Co., Ltd. (BEE)	Sampling Date	: 13/09/2022
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 19/09/2022
		Test Date	: 22/09/2022
Tel/Fax	: 038-949200	Report Date	: 28/09/2022

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND	RESULT	STANDARD
				ppm	ppm	ppm
Solvent Purification phase I	13/09/2022 09:30-15:30	Cyclohexane	NIOSH 1500/GC FID	< 0.01	1.23	300
		1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
		n-Heptane	NIOSH 1500/GC FID	< 0.01	0.18	500
Solvent Purification phase II	13/09/2022 09:10-15:10	Cyclohexane	NIOSH 1500/GC FID	< 0.01	9.80	300
		1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
		n-Heptane	NIOSH 1500/GC FID	< 0.01	1.58	500

Analyst By: Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By: Naimee Poonwananetch
(Miss Naimee Poonwananetch)
Technical Management Team

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Analyst By: Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By: Naimee Poonwananetch
(Miss Naimee Poonwananetch)
Technical Management Team

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 1807/65
For	: BST ENEOS Elastomer Co., Ltd. (BEE)	Sampling Date	: 05/09/2022
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 06/09/2022
		Test Date	: 16/09/2022
Tel/Fax	: 038-949200	Report Date	: 20/09/2022

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
ID : 10500	05/09/2022	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
Area : พนักงานปฏิบัติการผลิต (Polymerization) กษ A	08:50-14:50					
ID : 20500	05/09/2022	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
Area : พนักงานปฏิบัติการผลิต (Polymerization) กษ A	08:52-14:50					

Analyst By : Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By : Naimee Poomwongpetch
(Miss Naimee Poomwongpetch)
Technical Management Team

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 1807/65
For	: BST ENEOS Elastomer Co., Ltd. (BEE)	Sampling Date	: 05/09/2022
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 06/09/2022
		Test Date	: 16/09/2022
Tel/Fax	: 038-949200	Report Date	: 20/09/2022

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
ID : 10600	05/09/2022	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
Area : พนักงานปฏิบัติการผลิต (Finishing) กษ A	08:48-14:50	Toluene	NIOSH 1501/GC FID	< 0.02	ND	200
		Styrene	NIOSH 1501/GC FID	< 0.01	ND	100
ID : 20600	05/09/2022	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
Area : พนักงานปฏิบัติการผลิต (Finishing) กษ A	08:43-14:50	Toluene	NIOSH 1501/GC FID	< 0.02	ND	200
		Styrene	NIOSH 1501/GC FID	< 0.01	ND	100

Analyst By : Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By : Naimee Poomwongpetch
(Miss Naimee Poomwongpetch)
Technical Management Team

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 1840/65
For	: BST ENEOS Elastomer Co., Ltd. (BEE)	Sampling Date	: 08/09/2022
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 09/09/2022
Tel/Fax	: 038-949200	Test Date	: 17/09/2022
		Report Date	: 20/09/2022

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
ID : 19235	08/09/2022	1,3-Butadiene	NIOSH 1024/GC/FID	< 0.02	ND	1
Area : หน่วยงานปฏิบัติการผลิต (Finishing) กะ B	09-03-15:05	Toluene	NIOSH 1501/GC/FID	< 0.02	0.54	200
		Styrene	NIOSH 1501/GC/FID	< 0.01	ND	100
ID : 15242	08/09/2022	1,3-Butadiene	NIOSH 1024/GC/FID	< 0.02	ND	1
Area : หน่วยงานปฏิบัติการผลิต (Finishing) กะ B	09-07-15:05	Toluene	NIOSH 1501/GC/FID	< 0.02	ND	200
		Styrene	NIOSH 1501/GC/FID	< 0.01	ND	100

Analyst By: Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By: Na-Na Poo-ornpanich
(Miss Narisa Poo-ornpanich)
Technical Management Team

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

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 1840/65
For	: BST ENEOS Elastomer Co., Ltd. (BEE)	Sampling Date	: 08/09/2022
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 09/09/2022
Tel/Fax	: 038-949200	Test Date	: 17/09/2022
		Report Date	: 20/09/2022

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
ID : 13182	08/09/2022	1,3-Butadiene	NIOSH 1024/GC/FID	< 0.02	ND	1
Area : หน่วยงานปฏิบัติการผลิต (Polymerization) กะ B	08-59-15:05					
ID : 20356	08/09/2022	1,3-Butadiene	NIOSH 1024/GC/FID	< 0.02	ND	1
Area : หน่วยงานปฏิบัติการผลิต (Polymerization) กะ B	09-06-15:05					

Analyst By: Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By: Na-Na Poo-ornpanich
(Miss Narisa Poo-ornpanich)
Technical Management Team

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 1867/65
For	: BST ENEOS Elastomer Co., Ltd. (BEE)	Sampling Date	: 10/09/2022
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 13/09/2022
Tel/Fax	: 038-949280	Test Date	: 17/09/2022
		Report Date	: 20/09/2022

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
ID : 15246	10/09/2022	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
Area : พนักงานปฏิบัติงานผลิต (Polymerization) HSE C	08:46-14:50					
ID : 13180	10/09/2022	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
Area : พนักงานปฏิบัติงานผลิต (Polymerization) HSE C	09:48-14:50					

Analyst By : Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By : Marisa Poowasanpetch
(Miss Marisa Poowasanpetch)
Technical Management Team

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

ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 1867/65
For	: BST ENEOS Elastomer Co., Ltd. (BEE)	Sampling Date	: 10/09/2022
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 13/09/2022
Tel/Fax	: 038-949280	Test Date	: 17/09/2022
		Report Date	: 20/09/2022

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
ID : 19336	10/09/2022	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
Area : พนักงานปฏิบัติงานผลิต (Finishing) HSE C	09:04-14:50	Toluene	NIOSH 1501/GC FID	< 0.02	ND	200
		Styrene	NIOSH 1501/GC FID	< 0.01	ND	100
ID : 14201	10/09/2022	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
Area : พนักงานปฏิบัติงานผลิต (Finishing) HSE C	08:52-14:50	Toluene	NIOSH 1501/GC FID	< 0.02	ND	200
		Styrene	NIOSH 1501/GC FID	< 0.01	ND	100

Analyst By : Sudaporn Soonthorn
(Miss Sudaporn Soonthorn)

Approved By : Marisa Poowasanpetch
(Miss Marisa Poowasanpetch)
Technical Management Team

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 1827/65
Ref	: BST ENFOS Elastomer Co., Ltd. (BEE)	Sampling Date	: 06/09/2022
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 08/09/2022
Tel/Fax	: 038-949200	Test Date	: 17/09/2022
		Report Date	: 20/09/2022

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
ID : 14198 Area : พนักงานปฏิบัติงานผลิต (Polymerization) No D	06/09/2022 09:04-15:05	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1
ID : 16261 Area : พนักงานปฏิบัติงานผลิต (Polymerization) No D	06/09/2022 08:55-15:05	1,3-Butadiene	NIOSH 1024/GC FID	< 0.02	ND	1

Analyst By: Sudaporn Sonthorn
(Miss Sudaporn Sonthorn)

Approved By: Nansa Poowasanetch
(Miss Nansa Poowasanetch)
Technical Management Team

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ANALYSIS/TEST REPORT

Customer	: RND/SECOT Co., Ltd.	Request Service No.	: 1827/65
Ref	: BST ENFOS Elastomer Co., Ltd. (BEE)	Sampling Date	: 06/09/2022
Address	: Map Ta Phut Industrial Estate, Muang District, Rayong Province	Received Date	: 08/09/2022
Tel/Fax	: 038-949200	Test Date	: 17/09/2022
		Report Date	: 20/09/2022

SAMPLE DESCRIPTION / SAMPLING INFORMATION

Sample Designated As	: Workplace Air	Sampling Method	: Sorbent Adsorption
Sampling By	: SECOT Co., Ltd.	Sample Condition	: Normal

Sampling Location	Sampling Date/Time	Compound	Analytical Method	ND ppm	RESULT ppm	STANDARD ppm
ID : 14210 Area : พนักงานปฏิบัติงานผลิต (Finishing) No D	06/09/2022 09:02-15:05	1,3-Butadiene Toluene Styrene	NIOSH 1024/GC FID NIOSH 1501/GC FID NIOSH 1501/GC FID	< 0.02 < 0.02 < 0.01	ND 0.42 ND	1 200 100
ID : 14222 Area : พนักงานปฏิบัติงานผลิต (Finishing) No D	06/09/2022 08:57-15:05	1,3-Butadiene Toluene Styrene	NIOSH 1024/GC FID NIOSH 1501/GC FID NIOSH 1501/GC FID	< 0.02 < 0.02 < 0.01	ND ND ND	1 200 100

Analyst By: Sudaporn Sonthorn
(Miss Sudaporn Sonthorn)

Approved By: Nansa Poowasanetch
(Miss Nansa Poowasanetch)
Technical Management Team

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ภาคผนวก ง.2-9

ผลการตรวจวัดระดับเสียงภายในสถานประกอบการ



Noise Monitoring Result : Working Noise MTR-BBE (JBE)

Location : Cooling Unit Monitor Period : Sep 13, 2022
SLM Model : CASELLA CEL-246 Serial No : 3173339
Site Operator : Mr. Nitipong Jimlim

Calibrator Model : CASELLA CEL120/2 Serial No : 2839225
Calibration Ref dB(A) : 114.0 Certified Date : Dec 24, 2021
SLM Reading / Adjust dB(A) : 114.0/0.0 Expire Date : Dec 23, 2022
Cal Sheet No.: CEL120/2-2022-092

Time	Equivalent Sound Pressure Level (dB(A))	
	Sep 13, 2022	
00:00 - 01:00		
01:00 - 02:00		
02:00 - 03:00		
03:00 - 04:00		
04:00 - 05:00		
05:00 - 06:00		
06:00 - 07:00		
07:00 - 08:00		
08:00 - 09:00	80.9	
09:00 - 10:00	81.4	
10:00 - 11:00	81.8	
11:00 - 12:00	81.6	
12:00 - 13:00	81.8	
13:00 - 14:00	82.3	
14:00 - 15:00	82.7	
15:00 - 16:00	84.0	
16:00 - 17:00	83.9	
17:00 - 18:00	83.4	
18:00 - 19:00	83.3	
19:00 - 20:00	81.9	
20:00 - 21:00		
21:00 - 22:00		
22:00 - 23:00		
23:00 - 24:00		
Leq(12)*	82.5	
Lmax **	94.1	
Standard-12Hr	87 dB(A)	
Standard-Max	140 dB(A)	

Remark : * Average time between 08:00-20:00
** Maximum Sound Pressure Level between 08:00-20:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Sununta Sirawuttinanon)
Technical Management Team



Noise Monitoring Result : Working Noise MTR-BBE (JBE)

Location : Plant Air Unit Monitor Period : Sep 13, 2022
SLM Model : CASELLA CEL-246 Serial No : 3173337
Site Operator : Mr. Nitipong Jimlim

Calibrator Model : CASELLA CEL120/2 Serial No : 2839225
Calibration Ref dB(A) : 114.0 Certified Date : Dec 24, 2021
SLM Reading / Adjust dB(A) : 114.0/0.0 Expire Date : Dec 23, 2022
Cal Sheet No.: CEL120/2-2022-092

Time	Equivalent Sound Pressure Level (dB(A))	
	Sep 13, 2022	
00:00 - 01:00		
01:00 - 02:00		
02:00 - 03:00		
03:00 - 04:00		
04:00 - 05:00		
05:00 - 06:00		
06:00 - 07:00		
07:00 - 08:00		
08:00 - 09:00		
09:00 - 10:00	82.1	
10:00 - 11:00	82.8	
11:00 - 12:00	82.4	
12:00 - 13:00	81.3	
13:00 - 14:00	81.9	
14:00 - 15:00	80.0	
15:00 - 16:00	79.7	
16:00 - 17:00	79.7	
17:00 - 18:00	79.6	
18:00 - 19:00	79.6	
19:00 - 20:00	79.6	
20:00 - 21:00	79.6	
21:00 - 22:00		
22:00 - 23:00		
23:00 - 24:00		
Leq(12)*	80.9	
Lmax **	89.1	
Standard-12Hr	87 dB(A)	
Standard-Max	140 dB(A)	

Remark : * Average time between 09:00-21:00
** Maximum Sound Pressure Level between 09:00-21:00

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Sununta Sirawuttinanon)
Technical Management Team

ภาคผนวก ง.2-10

ผลการตรวจวัดระดับเสียงที่พนักงานได้รับเฉลี่ย
ตลอดระยะเวลาการทำงาน



บริษัท ซีคอต จำกัด
SECOT CO.,LTD.

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TEL : +66(0) 2959-3600 FAX : +66(0) 2595-3535 E-mail : envserv@secot.co.th

NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME : BST ENEOS Elastomer Co., Ltd
(BEE)
MEASUREMENT BY : SECOT Co., Ltd.
MEASUREMENT DATE : 13/09/2022
SITE OPERATOR : Miss Alisa Kaniwaranon

REFERENCE NO. : 222028_Noise Dose/Sep
INSTRUMENT : Noise Dosimeter
CALIBRATOR TYPE : Pulsar Model 22R
SERIAL NO. : 79781
CALIBRATOR REF. : 114 dB @ 1kHz

USER NAME	AREA/SECTION	SOUND PRESSURE LEVEL (dB(A))		
		TWA (8 hr)	%Dose	STANDARD*
คุณเอกกราช วัชรภัก	Operation/ Air Plant	80.2	32.9	85.0
คุณเมธี เหล่าโคตร	Operation/ Cooling	84.5	89.5	85.0

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Sununta Sirawutthinanon)
Technical Management Team

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NOISE MEASUREMENT REPORT : NOISE DOSE

CLIENT NAME : BST ENEOS Elastomer Co., Ltd
(BEE)
MEASUREMENT BY : SECOT Co., Ltd.
MEASUREMENT DATE : 13/09/2022
SITE OPERATOR : Miss Alisa Kaniwaranon

REFERENCE NO. : 222028_Noise Dose/Sep
INSTRUMENT : Noise Dosimeter
CALIBRATOR TYPE : Pulsar Model 22R
SERIAL NO. : 79781
CALIBRATOR REF. : 114 dB @ 1kHz

USER NAME	AREA/SECTION	SOUND PRESSURE LEVEL (dB(A))		
		TWA (12 hr)	%Dose	STANDARD*
คุณเอกกราช วัชรภัก	Operation/ Air Plant	78.4	32.9	83.0
คุณเมธี เหล่าโคตร	Operation/ Cooling	82.8	89.5	83.0

(Miss Katesarin Vorradetwittaya)
Environmental Scientist

(Miss Sununta Sirawutthinanon)
Technical Management Team

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