

คุณภาพอากาศจากแหล่งกำเนิด



Request No. LA67-1030

Report No. 6710-0431

TEST REPORT

CUSTOMER : NPC Safety and Environmental Service Co., Ltd.
ADDRESS : 209 Pakomsongkroh Rd., T. Maiphat A. Muangranyong, Rayong 21150
SAMPLE SOURCE : PTT Asahi Chemical Co., Ltd.
SAMPLE POINT : ERU Stack (AOG)
SAMPLING DATE : 07/10/2024
RECEIVED DATE : 11/10/2024
TESTED DATE : 11-15/10/2024
REPORTED DATE : 16/10/2024

SAMPLE NO. : 04069

SAMPLING TIME : 10:00-10:42

REPORTED DATE : 16/10/2024

STACK DESCRIPTION[®]

Height : 60.30 m
Diameter : 4.30 m
Type of Process : Combustion
Type Of Fuel : Natural Gas
Temperature : 192.00 °C
Oxygen Content : 3.85 %
Air Velocity : 15.91 m/s
Barometric Pressure : 756.25 mmHg
Flow rate⁴ : 133.88 m³/s
Atmospheric Temperature : 33.00 °C
Moisture Content : 9.07 %

PARAMETER	TEST METHOD	TIME	RESULT ⁴	STD	UNIT
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	10:00-10:42	5.4	320 ¹ , 32 ² , 60 ³	mg/m ³ g/s

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Limit Values in Environmental Impact Assessment Report
- ³ มาตราฐานควบคุมการปล่อยก๊าซพิษจากโรงไฟฟ้า พ.ศ. 2566
- ⁴ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- [®] These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Metee Sukprasert (1-003-0-0035)

Examined By:

(Miss Apiradee Chuen-arom)

(1-003-0-0007)

16/10/2024

Approved By:

(Mr. Thongchai Boonsak)

(1-003-0-0012)

16/10/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด



(Mr. Thongchai Boonsak)

(1-003-0-0012)

16/10/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

TEST REPORT

CUSTOMER : NPC Safety and Environmental Service Co., Ltd.
ADDRESS : 209 Pakomsongkroh Rd., T. Maiphat A. Muangranyong, Rayong 21150
SAMPLE SOURCE : PTT Asahi Chemical Co., Ltd.
SAMPLE POINT : ERU Stack (AOG)
SAMPLING DATE : 07/10/2024
RECEIVED DATE : 11/10/2024
TESTED DATE : 11-15/10/2024
REPORTED DATE : 16/10/2024

SAMPLE NO. : 04070

SAMPLING TIME : 10:05-10:35

REPORTED DATE : 16/10/2024

STACK DESCRIPTION[®]

Height : 60.30 m
Diameter : 4.30 m
Type of Process : Combustion
Type Of Fuel : Natural Gas
Temperature : 192.00 °C
Oxygen Content : 3.85 %
Air Velocity : 15.91 m/s
Barometric Pressure : 756.25 mmHg
Flow rate⁴ : 133.88 m³/s
Atmospheric Temperature : 33.00 °C
Moisture Content : 9.07 %

PARAMETER	TEST METHOD	TIME	RESULT ⁴	STD	UNIT
Sulfur Dioxide (SO ₂)	Absorption, Barium-Thorin Titrimetric (U.S. EPA Method 6)	10:05-10:35	<3.4 <1.3 <0.4552 [®]	3.85 % O ₂ 7 % O ₂ 157 ¹ 60 ¹ , 28 ² , 20 ³ 10.57 ²	mg/m ³ ppm g/s

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Limit Values in Environmental Impact Assessment Report
- ³ มาตราฐานควบคุมการปล่อยก๊าซพิษจากโรงไฟฟ้า พ.ศ. 2566
- ⁴ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- [®] These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Metee Sukprasert (1-003-0-0035)

Examined By:

(Miss Apiradee Chuen-arom)

(1-003-0-0007)

16/10/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด



(Mr. Thongchai Boonsak)

(1-003-0-0012)

16/10/2024

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Request No. LA67-1030

Report No. 6710-0438

TEST REPORT

CUSTOMER : NPC Safety and Environmental Service Co., Ltd.
ADDRESS : 20/9 Pakomsongkrohrad Rd., T. Mapthaput A. Muangrayong, Rayong 21150

SAMPLE SOURCE : PTT Asahi Chemical Co., Ltd.

SAMPLE POINT : ERU Stack (AOG)

SAMPLING DATE : 07/10/2024

RECEIVED DATE : 11/10/2024

TESTED DATE : 11-18/10/2024

STACK DESCRIPTION

Height : 60.30 m
Diameter : 4.30 m
Type of Process : Combustion
Type Of Fuel : Natural Gas
Temperature : 192.00 °C
Oxygen Content : 3.85 %
Air Velocity : 15.92 m/s
Barometric Pressure : 756.25 mmHg
Flow rate^a : 122.49 m³/s
Atmospheric Temperature : 33.00 °C
Moisture Content : 9.22 %

PARAMETER	TEST METHOD	TIME	RESULT ^a	STD ^d	UNIT
Hydrogen Cyanide ^b (HCN)	Spectrophotometric	10:05-10:35	0.41	0.43	2.0 mg/m ³

REMARK:

- ^{1.} IFC, 2007. Environmental, Health and Safety Guidelines for Large Volume Petroleum-Based Organic Chemicals Manufacturing
 - ^{2.} Standard Condition (Temperature 0°C, Pressure 760 mmHg) and Dry Basis
 - ^{3.} Sampling by Eastern Thai Consulting 1992 Co.,Ltd. (Mr. Metee Sukprasert.)
- Analysed By The Office of Public Health and Environmental Technology Services, Faculty of Public Health, Mahidol University.



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Examined By....

(Mr. Thongchai Boonsak)

18/10/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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TEST REPORT

CUSTOMER : NPC Safety and Environmental Service Co., Ltd.
ADDRESS : 20/9 Pakomsongkrohrad Rd., T. Mapthaput A. Muangrayong, Rayong 21150

SAMPLE SOURCE : PTT Asahi Chemical Co., Ltd.

SAMPLE POINT : SAR Stack

SAMPLING DATE : 04/10/2024

RECEIVED DATE : 11/10/2024

TESTED DATE : 11-15/10/2024

STACK DESCRIPTION^a

Height : 61.00 m
Diameter : 2.40 m
Type of Process : Combustion
Type Of Fuel : Natural Gas
Temperature : 45.00 °C
Oxygen Content : 5.42 %
Air Velocity : 1.70 m/s
Barometric Pressure : 760.00 mmHg
Flow rate^a : 6.62 m³/s
Atmospheric Temperature : 29.00 °C
Moisture Content : 8.04 %

PARAMETER	TEST METHOD	TIME	RESULT ^a	STD	UNIT
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	10:40-13:40	3.0	320 ^d , 32 ^d	mg/m ³ g/s

REMARK:

- ^{1.} Notification of The Ministry of Industry B.E. 2549 (2006)
- ^{2.} Limit Values in Environmental Impact Assessment Report
- ^{3.} Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- ^{4.} These Data Outside The Scope of The Registration of The Department of Industrial Works.
- ^{5.} Sampling By Mr. Metee Sukprasert (3-003-P-0035)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Examined By....

(Miss Apradee Chuen-arom)

(3-003-P-0007)

16/10/2024

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Request No. LA67-1030

Report No. 6710-0424

TEST REPORT

CUSTOMER : NPC Safety and Environmental Service Co., Ltd.
ADDRESS : 20/9 Pakomsongkroh Rd., T. Mapiaphut A. Muangrayong, Rayong 21150
SAMPLE SOURCE : PTT Asahi Chemical Co., Ltd.
SAMPLE POINT : SAR Stack
SAMPLING DATE : 04/10/2024
RECEIVED DATE : 11/10/2024
TESTED DATE : 11-15/10/2024
REPORTED DATE : 16/10/2024

SAMPLE NO. : 04062

SAMPLING TIME : 10:45-11:15

REPORTED DATE : 16/10/2024

STACK DESCRIPTION[®]

Height : 61.00 m
Diameter : 2.40 m
Temperature : 45.00 °C
Air Velocity : 1.70 m/s
Flow rate[®] : 6.62 m³/s
Moisture Content : 8.04 %
Type of Process : Combustion
Type Of Fuel : Natural Gas
Oxygen Content : 5.42 %
Barometric Pressure : 760.00 mmHg
Atmospheric Temperature : 29.00 °C

PARAMETER	TEST METHOD	TIME	RESULT [®]		STD	UNIT
			5.42 % O ₂	7 % O ₂		
Sulfur Dioxide (SO ₂)	Absorption, Barium-Thorin	10:45-11:15	<3.4	<3.1	157 [®]	mg/m ³
	Titrimetric (U.S. EPA Method 6)		<1.3	<1.2	60 [®] , 28 [®]	ppm
			<0.0225 [®]	-	0.34 [®]	g/s

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Limit Values in Environmental Impact Assessment Report
- ³ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- ⁴ These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Metee Sukprasert (1-003-0-0035)

Examined By...
(Miss Apradee Chuen-arom)
(1-003-0-0007)
16/10/2024



Approved By...

(Mr. Thongchai Boonsak)
(1-003-0-0012)
16/10/2024

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TEST REPORT

CUSTOMER : NPC Safety and Environmental Service Co., Ltd.
ADDRESS : 20/9 Pakomsongkroh Rd., T. Mapiaphut A. Muangrayong, Rayong 21150
SAMPLE SOURCE : PTT Asahi Chemical Co., Ltd.
SAMPLE POINT : SAR Stack
SAMPLING DATE : 04/10/2024
RECEIVED DATE : 11/10/2024
TESTED DATE : 11-15/10/2024
REPORTED DATE : 16/10/2024

SAMPLE NO. : 04063

SAMPLING TIME : 11:00-11:05

REPORTED DATE : 16/10/2024

STACK DESCRIPTION[®]

Height : 61.00 m
Diameter : 2.40 m
Temperature : 45.00 °C
Air Velocity : 1.70 m/s
Flow rate[®] : 6.62 m³/s
Moisture Content : 8.04 %
Type of Process : Combustion
Type Of Fuel : Natural Gas
Oxygen Content : 5.42 %
Barometric Pressure : 760.00 mmHg
Atmospheric Temperature : 29.00 °C

PARAMETER	TEST METHOD	TIME	RESULT [®]		STD	UNIT
			5.42 % O ₂	7 % O ₂		
Oxides of Nitrogen (NO _x as NO ₂)	Absorption, Phenoldisulfonic	11:00-11:05	36.0	32.3	376 [®]	mg/m ³
	Acid (U.S. EPA Method 7)		19.1	17.2	200 [®] , 50 [®]	ppm
			0.2383 [®]	-	0.44 [®]	g/s

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Limit Values in Environmental Impact Assessment Report
- ³ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- ⁴ These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Metee Sukprasert (1-003-0-0035)

Examined By...
(Miss Apradee Chuen-arom)
(1-003-0-0007)
16/10/2024



Approved By...

(Mr. Thongchai Boonsak)
(1-003-0-0012)
16/10/2024

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Request No. LA67-1030

Report No. 6710-0441

TEST REPORT

CUSTOMER : NPC Safety and Environmental Service Co., Ltd.
ADDRESS : 20/9 Pakomsongkroh Rd., T. Maipaphut A. Muangrayong, Rayong 21150
SAMPLE SOURCE : PTT Asahi Chemical Co., Ltd.
SAMPLE POINT : WWI Stack
SAMPLING DATE : 08/10/2024
RECEIVED DATE : 11/10/2024
TESTED DATE : 11-15/10/2024
REPORTED DATE : 16/10/2024

SAMPLE NO. : 04079
SAMPLING TIME : 09:45-10:40
REPORTED DATE : 16/10/2024

STACK DESCRIPTION[®]

Height : 60.00 m
Diameter : 1.89 m
Temperature : 52.00 °C
Air Velocity : 2.97 m/s
Flow rate[®] : 7.16 m³/s
Moisture Content : 5.80 %
Type Of Fuel : Natural Gas
Oxygen Content : 11.85 %
Barometric Pressure : 756.25 mmHg
Atmospheric Temperature : 33.00 °C
Type Of Process : Combustion

PARAMETER	TEST METHOD	TIME	RESULT [®]		STD	UNIT
			11.85 % O ₂	7 % O ₂		
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	09:45-10:40	0.2	0.3	320 ¹ , 32 ²	mg/m ³ g/s

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Limit Values in Environmental Impact Assessment Report
- ³ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- ⁴ These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Metee Sukprasert (๓-003-๓-0035)

Examined By : (Miss Apradee Chuen-arom)
(๓-003-๓-0007)
Approved By : (Mr. Thongchai Boonsak)
(๓-003-๓-0012)
บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
16/10/2024

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Request No. LA67-1030

Report No. 6710-0442

TEST REPORT

CUSTOMER : NPC Safety and Environmental Service Co., Ltd.
ADDRESS : 20/9 Pakomsongkroh Rd., T. Maipaphut A. Muangrayong, Rayong 21150
SAMPLE SOURCE : PTT Asahi Chemical Co., Ltd.
SAMPLE POINT : WWI Stack
SAMPLING DATE : 08/10/2024
RECEIVED DATE : 11/10/2024
TESTED DATE : 11-15/10/2024
REPORTED DATE : 16/10/2024

SAMPLE NO. : 04080
SAMPLING TIME : 09:50-10:20
REPORTED DATE : 16/10/2024

STACK DESCRIPTION[®]

Height : 60.00 m
Diameter : 1.89 m
Temperature : 52.00 °C
Air Velocity : 2.97 m/s
Flow rate[®] : 7.16 m³/s
Moisture Content : 5.80 %
Type Of Fuel : Natural Gas
Oxygen Content : 11.85 %
Barometric Pressure : 756.25 mmHg
Atmospheric Temperature : 33.00 °C
Type Of Process : Combustion

PARAMETER	TEST METHOD	TIME	RESULT [®]		STD	UNIT
			11.85 % O ₂	7 % O ₂		
Sulfur Dioxide (SO ₂)	Absorption, Barium-Thorin Titrimetric (U.S. EPA Method 6)	09:50-10:20	<3.4	<1.3	157 ¹ , 60 ¹ , 28 ²	mg/m ³ ppm g/s

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Limit Values in Environmental Impact Assessment Report
- ³ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- ⁴ These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Metee Sukprasert (๓-003-๓-0035)

Examined By : (Miss Apradee Chuen-arom)
(๓-003-๓-0007)
Approved By : (Mr. Thongchai Boonsak)
(๓-003-๓-0012)
บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
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683 หมู่ 11 ต.สุราษฎร์ธานี 8 ต.หนองปรือ อ.หัวหิน จ.ประจวบคีรีขันธ์ 20230
 โทร. 0-3848-1197, 0-3876-3031-2 แฟกซ์ : 0-3848-2095
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EASTERN THAI CONSULTING 1992 CO., LTD.
 683 Moo 11 Sukhaphiban 8 Rd., Nongkham, Si Racha, Chonburi 20230
 Tel. 0-3848-1197, 0-3876-3031-2 Fax : 0-3848-2095
 Website : http://www.etc1992.com E-mail : info@etc1992.com

Request No. LA67-1030

Report No. 6710-0443

TEST REPORT

CUSTOMER : NPC Safety and Environmental Service Co., Ltd.
 ADDRESS : 209 Pakomsongkroh Rd., T. Maipaphut A. Muangrayong, Rayong 21150
 SAMPLE SOURCE : PTT Asahi Chemical Co., Ltd.
 SAMPLE POINT : WWI Stack
 SAMPLING DATE : 08/10/2024
 RECEIVED DATE : 11/10/2024
 TESTED DATE : 11-15/10/2024
 SAMPLE NO. : 04081
 SAMPLING TIME : 10:05-10:10
 REPORTED DATE : 16/10/2024

STACK DESCRIPTION®

Height : 60.00 m
 Diameter : 1.89 m
 Temperature : 52.00 °C
 Air Velocity : 2.97 m/s
 Flow rate^o : 7.16 m³/s
 Moisture Content : 5.80 %
 Type of Process : Combustion
 Type Of Fuel : Natural Gas
 Oxygen Content : 11.85 %
 Barometric Pressure : 756.25 mmHg
 Atmospheric Temperature : 33.00 °C

PARAMETER	TEST METHOD	TIME	RESULT ^a	STD	UNIT
			11.85 % O ₂		7 % O ₂
Oxides of Nitrogen (NO _x as NO ₂)	Absorption, Phenoldisulfonic Acid (U.S. EPA Method 7)	10:05-10:10	11.9 6.3 0.0852 [®]	18.3 9.7 -	376 ^d 200 ^d , 50 ^d 1.69 ^d mg/m ³ ppm g/s

REMARK:

- ^{1.} Notification of The Ministry of Industry B.E. 2549 (2006)
- ^{2.} Limit Values in Environmental Impact Assessment Report
- ^{3.} Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- ^{4.} These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Metee Sukprasert (๓-003-๓-0035)

Examined By :
 (Miss Apiradee Chuen-arom)
 (๓-003-๓-0007)
 16/10/2024



Approved By :
 (Mr. Thongchai Boonsak)
 (๓-003-๓-0012)
 16/10/2024

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