

ภาคผนวก

ภาคผนวกที่	1	ผลการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม
ภาคผนวกที่	2	เอกสารขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน
ภาคผนวกที่	3	ใบรับรองความสามารถห้องปฏิบัติการวิเคราะห์
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ภาคผนวกที่	7	สรุปผลการตรวจสอบสภาพการได้ยิน (ตัด ล้างและปั้มเหรียญ), ผลการตรวจเลือดของพนักงาน (หล่อและหลอมโลหะ), ผลการตรวจหัวใจ และสุขภาพทั่วไปของพนักงาน ประจำปี 2567
ภาคผนวกที่	8	ผลการพิจารณารายงานการประเมินผลกระทบสิ่งแวดล้อม
ภาคผนวกที่	9	เอกสารการฝึกอบรม ประจำเดือนกรกฎาคม-ธันวาคม 2567
ภาคผนวกที่	10	เอกสารใบกำกับกาขนส่งของเสียอันตราย
ภาคผนวกที่	11	การเตรียมรองรับ และการจัดการภาวะฉุกเฉิน
ภาคผนวกที่	12	สรุปสถิติอุบัติเหตุ ประจำเดือนกรกฎาคม-ธันวาคม 2567
ภาคผนวกที่	13	แผนการดำเนินงานด้านความปลอดภัย ประจำปี 2567
ภาคผนวกที่	14	เอกสารกิจกรรมส่งเสริมด้านสิ่งแวดล้อมและความปลอดภัย
ภาคผนวกที่	15	โครงการอนุรักษ์การได้ยิน
ภาคผนวกที่	16	เอกสารการตรวจสอบ Dust Collector ของถุงกรอง
ภาคผนวกที่	17	แบบบันทึกรายการตรวจสอบปริมาณของเสียอันตราย
ภาคผนวกที่	18	หนังสือการพิจารณารายงานผลการปฏิบัติตามมาตรการฯ เลขที่ ทส 1016.5/15508 ลงวันที่ 6 ธันวาคม 2560
ภาคผนวกที่	19	หนังสือขอแจ้งเปลี่ยนชื่อของโครงการ
ภาคผนวกที่	20	แบบรายงานผลการฝึกซ้อมดับเพลิง และฝึกซ้อมอพยพหนีไฟ ประจำปี 2567
ภาคผนวกที่	21	เอกสารยกเลิกการใช้ปล่องหม้อต้มกลั่น (Stack Boiler)
ภาคผนวกที่	22	เอกสารยกเลิกการใช้ Trichloroethylene

ภาคผนวกที่ 1

ผลการติดตามตรวจสอบผลกระทบสิ่งแวดล้อม

Request No. LA67-0912

Report No. 6709-0173

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : Outlet Dust Collector of Melting Casting Stack

SAMPLE NO. : 03263

SAMPLING DATE : 09/09/2024

SAMPLING TIME : 10:40-11:15

RECEIVED DATE : 11/09/2024

REPORTED DATE : 21/09/2024

TESTED DATE : 11-12/09/2024

STACK DESCRIPTION[@]

Height :	13.00	m	Type of Process :	Exhaust
Diameter :	0.93	m	Type of Fuel :	-
Temperature :	51.00	°C	Oxygen Content :	20.90 %
Air Velocity :	25.52	m/s	Barometric Pressure :	754.75 mmHg
Flow rate ² :	15.31	m ³ /s	Atmospheric Temperature :	35.00 °C
Moisture Content :	3.18	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	10:40-11:15	0.8	400	mg/m ³

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Warakorn Vitayasewee (ว-003-ก-0021)
- [@] These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

21/09/2024



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Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

21/09/2024

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Request No. LA67-0912

Report No. 6709-0174

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : Outlet Dust Collector of Melting Casting Stack

SAMPLE NO. : 03264

SAMPLING DATE : 09/09/2024

SAMPLING TIME : 10:40-11:15

RECEIVED DATE : 11/09/2024

REPORTED DATE : 21/09/2024

TESTED DATE : 11-19/09/2024

STACK DESCRIPTION

Height :	13.00	m	Type of Process :	Exhaust
Diameter :	0.93	m	Type of Fuel :	-
Temperature :	51.00	°C	Oxygen Content :	20.90 %
Air Velocity :	25.52	m/s	Barometric Pressure :	754.75 mmHg
Flow rate ¹ :	15.31	m ³ /s	Atmospheric Temperature :	35.00 °C
Moisture Content :	3.18	%		

PARAMETER	TEST METHOD	TIME	RESULT ¹	UNIT
Zinc Oxide	Isokinetic, Digestion, ICP (U.S. EPA Method 29)	10:40-11:15	0.020	mg/m ³

REMARK:

- ¹ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Warakorn Vitayasewee
- Parameter Outside The Scope of The Registration of The Department of Industrial Works.



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Approved By.....



(Mr. Thongchai Boonsak)

21/09/2024

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Request No. LA67-1164

Report No. 6712-0159

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : Hot Mill Stack (New Slab Heater)

SAMPLING DATE : 21/11/2024

RECEIVED DATE : 26/11/2024

TESTED DATE : 26-28/11/2024

STACK DESCRIPTION @

Height : 30.00 m

Diameter : 2.00 m

Temperature : 256.00 °C

Air Velocity : 4.07 m/s

Flow rate² : 6.75 m³/s

Moisture Content : 6.06 %

Type of Process : Combustion

Type of Fuel : Natural Gas

Operation Capacity : 6 piece /hr.

Oxygen Content : 1.77 %

Barometric Pressure : 757.75 mmHg

Atmospheric Temperature : 33.00 °C

PARAMETER	TEST METHOD	TIME	RESULT ²		STD ¹	UNIT
			1.77 % O ₂	7 % O ₂		
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	09:20-10:20	27.8	20.2	320	mg/m ³

REMARK:

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

Examined By.....

(Miss Apiradee Chuen-arom)

(จ-003-ท-0007)

07/12/2024



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Approved By.....

(Mr. Thongchai Boonsak)

(จ-003-ท-0012)

07/12/2024

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Request No. LA67-1164

Report No. 6712-0161

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Hot Mill Stack (New Slab Heater) SAMPLE NO. : 05285
SAMPLING DATE : 21/11/2024 SAMPLING TIME : 09:50-09:55
RECEIVED DATE : 26/11/2024 REPORTED DATE : 07/12/2024
TESTED DATE : 26/11/2024-06/12/2024

STACK DESCRIPTION @

Height :	30.00	m	Type of Process :	Combustion
Diameter :	2.00	m	Type of Fuel :	Natural Gas
Temperature :	256.00	°C	Operation Capacity :	6 piece /hr.
Air Velocity :	4.07	m/s	Oxygen Content :	1.77 %
Flow rate ² :	6.75	m ³ /s	Barometric Pressure :	757.75 mmHg
Moisture Content :	6.06	%	Atmospheric Temperature :	33.00 °C

PARAMETER	TEST METHOD	TIME	RESULT ²		STD ¹	UNIT
			1.77 % O ₂	7 % O ₂		
Oxides of Nitrogen	Absorption, Phenoldisulfonic Acid	09:50-09:55	27.8	20.2	376	mg/m ³
(NO _x as NO ₂)	(U.S. EPA Method 7)		14.8	10.8	200	ppm

REMARK:

- ^{1/1} Notification of The Ministry of Industry B.E. 2549 (2006)
- ^{2/2} Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Metee Sukprasert (ว-003-ค-0035)
- ^{4/4} These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....



(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

07/12/2024



Approved By.....



(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

07/12/2024

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Request No. LA67-1164

Report No. 6712-0160

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : Hot Mill Stack (New Slab Heater)

SAMPLING DATE : 21/11/2024

RECEIVED DATE : 26/11/2024

TESTED DATE : 26-28/11/2024

STACK DESCRIPTION @

Height : 30.00 m

Diameter : 2.00 m

Temperature : 256.00 °C

Air Velocity : 4.07 m/s

Flow rate² : 6.75 m³/s

Moisture Content : 6.06 %

Type of Process : Combustion

Type of Fuel : Natural Gas

Operation Capacity : 6 piece /hr.

Oxygen Content : 1.77 %

Barometric Pressure : 757.75 mmHg

Atmospheric Temperature : 33.00 °C

PARAMETER	TEST METHOD	TIME	RESULT ²		STD ¹	UNIT
			1.77 % O ₂	7 % O ₂		
Sulfur Dioxide (SO ₂)	Absorption, Barium-Thorin	09:20-09:50	<3.4	<2.5	157	mg/m ³
	Titrimetric (U.S. EPA Method 6)		<1.3	<0.9	60	ppm

REMARK:

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

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ก-0007)

07/12/2024



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Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ก-0012)

07/12/2024

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Request No. LA67-0941

Report No. 6710-0150

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ปล่องกระบวนการล้าง (PK-01)

SAMPLING DATE : 20/09/2024

RECEIVED DATE : 25/09/2024

TESTED DATE : 25/09/2024-01/10/2024

SAMPLE NO. : 03728

SAMPLING TIME : 09:50-09:55

REPORTED DATE : 03/10/2024

STACK DESCRIPTION @

Height : 12.00 m

Diameter : 0.80 m

Temperature : 37.00 °C

Air Velocity : 7.79 m/s

Flow rate¹ : 3.60 m³/s

Moisture Content : 3.46 %

Type of Process : Wet Scrubber

Type of Fuel : -

Oxygen Content : 20.90 %

Barometric Pressure : 752.50 mmHg

Atmospheric Temperature : 33.00 °C

PARAMETER	TEST METHOD	TIME	RESULT ¹	UNIT
Oxides of Nitrogen	Absorption, Phenoldisulfonic Acid	09:50-09:55	<2.0	mg/m ³
(NO _x as NO ₂)	(U.S. EPA Method 7)		<1.0	ppm

REMARK:

- ¹ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Nitchaphon Tonglor (1-003-ค-0032)
- [@] These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(1-003-ค-0007)

03/10/2024



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Approved By.....

(Mr. Thongchai Boonsak)

(1-003-ค-0012)

03/10/2024

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Request No. LA67-0941

Report No. 6710-0149

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ปล่องกระบวนการถลุง (PK-01)
SAMPLING DATE : 20/09/2024
RECEIVED DATE : 25/09/2024
TESTED DATE : 25-26/09/2024

SAMPLE NO. : 03727
SAMPLING TIME : 09:35-10:05
REPORTED DATE : 03/10/2024

STACK DESCRIPTION[®]

Height :	12.00	m	Type of Process :	Wet Scrubber
Diameter :	0.80	m	Type of Fuel :	-
Temperature :	37.00	°C	Oxygen Content :	20.90 %
Air Velocity :	7.79	m/s	Barometric Pressure :	752.50 mmHg
Flow rate ² :	3.60	m ³ /s	Atmospheric Temperature :	33.00 °C
Moisture Content :	3.46	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Sulfur Dioxide	Absorption, Barium-Thorin	09:35-10:05	<3.4	1,310	mg/m ³
(SO ₂)	Titrimetric (U.S. EPA Method 6)		<1.3	500	ppm

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Nitchaphon Tonglor (ว-003-ท-0032)
- [®] These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

03/10/2024



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Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

03/10/2024

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Request No. LA67-0941

Report No. 6710-0148

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ปล่องกระบวนการล้าง (PK-01)

SAMPLE NO. : 03726

SAMPLING DATE : 20/09/2024

SAMPLING TIME : 09:35-10:13

RECEIVED DATE : 25/09/2024

REPORTED DATE : 03/10/2024

TESTED DATE : 25-26/09/2024

STACK DESCRIPTION @

Height : 12.00 m

Diameter : 0.80 m

Temperature : 37.00 °C

Air Velocity : 7.79 m/s

Flow rate² : 3.60 m³/s

Moisture Content : 3.46 %

Type of Process : Wet Scrubber

Type of Fuel : -

Oxygen Content : 20.90 %

Barometric Pressure : 752.50 mmHg

Atmospheric Temperature : 33.00 °C

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Sulfuric Acid	Isokinetic, Barium-Thorin Titrimetric	09:35-10:13	0.86	100	mg/m ³
(H ₂ SO ₄)	(U.S. EPA Method 8)		0.21	25	ppm

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Nitchaphon Tonglor (ว-003-ค-0032)
- ⁴ These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

03/10/2024



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Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

03/10/2024

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Request No. LA67-0912

Report No. 6709-0181

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ปล่องกระบวนการล้าง (AP-02) SAMPLE NO. : 03271
SAMPLING DATE : 09/09/2024 SAMPLING TIME : 08:45-08:50
RECEIVED DATE : 11/09/2024 REPORTED DATE : 21/09/2024
TESTED DATE : 11-17/09/2024
STACK DESCRIPTION @

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.46	m	Type of Fuel :	-
Temperature :	34.00	°C	Oxygen Content :	20.90 %
Air Velocity :	7.18	m/s	Barometric Pressure :	754.75 mmHg
Flow rate ¹ :	1.12	m ³ /s	Atmospheric Temperature :	34.00 °C
Moisture Content :	2.76	%		

PARAMETER	TEST METHOD	TIME	RESULT ¹	UNIT
Oxides of Nitrogen	Absorption, Phenoldisulfonic Acid	08:45-08:50	<2.0	mg/m ³
(NO _x as NO ₂)	(U.S. EPA Method 7)		<1.0	ppm

REMARK:

- ¹ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- ² These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Warakorn Vitayasewee (ว-003-ค-0021)

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

21/09/2024



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Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

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Request No. LA67-0912

Report No. 6709-0180

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ปล่องกระบวนการล้าง (AP-02) SAMPLE NO. : 03270
SAMPLING DATE : 09/09/2024 SAMPLING TIME : 08:40-09:10
RECEIVED DATE : 11/09/2024 REPORTED DATE : 21/09/2024
TESTED DATE : 11-16/09/2024
STACK DESCRIPTION @

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.46	m	Type of Fuel :	-
Temperature :	34.00	°C	Oxygen Content :	20.90 %
Air Velocity :	7.18	m/s	Barometric Pressure :	754.75 mmHg
Flow rate ² :	1.12	m ³ /s	Atmospheric Temperature :	34.00 °C
Moisture Content :	2.76	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Sulfur Dioxide	Absorption, Barium-Thorin	08:40-09:10	<3.4	1,310	mg/m ³
(SO ₂)	Titrimetric (U.S. EPA Method 6)		<1.3	500	ppm

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- ³ These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Warakorn Vitayaseewee (ว-003-ก-0021)

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ก-0007)

21/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ก-0012)

21/09/2024

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Request No. LA67-0912

Report No. 6709-0183

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ปล่องกระบวนการถลุง (AP-02)

SAMPLE NO. : 03273

SAMPLING DATE : 09/09/2024

SAMPLING TIME : 09:15-09:50

RECEIVED DATE : 11/09/2024

REPORTED DATE : 21/09/2024

TESTED DATE : 11-16/09/2024

STACK DESCRIPTION @

Height : 10.00 m
Diameter : 0.46 m
Temperature : 34.00 °C
Air Velocity : 7.10 m/s
Flow rate² : 1.11 m³/s
Moisture Content : 2.94 %

Type of Process : Exhaust
Type of Fuel : -
Oxygen Content : 20.90 %
Barometric Pressure : 754.75 mmHg
Atmospheric Temperature : 34.00 °C

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Sulfuric Acid	Isokinetic, Barium-Thorin Titrimetric	09:15-09:50	<0.05	100	mg/m ³
(H ₂ SO ₄)	(U.S. EPA Method 8)		<0.01	25	ppm

REMARK:

- ¹/ Notification of The Ministry of Industry B.E. 2549 (2006)
- ²/ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- ³/ These Data Outside The Scope of The Registration of The Department of Industrial Works.
4. Sampling By Mr. Warakorn Vitayaseewee (ว-003-ก-0021)

Examined By 

(Miss Apiradee Chuen-arom)

(ว-003-ก-0007)

21/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By 

(Mr. Thongchai Boonsak)

(ว-003-ก-0012)

21/09/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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COPY

Request No. LA67-0929

Report No. 6709-0230

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ปล่องกระบวนการล้าง (PK-03) SAMPLE NO. : 03407
SAMPLING DATE : 14/09/2024 SAMPLING TIME : 09:10-09:15
RECEIVED DATE : 20/09/2024 REPORTED DATE : 24/09/2024
TESTED DATE : 20/09/2024
STACK DESCRIPTION @

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.70	m	Type of Fuel :	-
Temperature :	31.00	°C	Oxygen Content :	20.90 %
Air Velocity :	8.41	m/s	Barometric Pressure :	755.50 mmHg
Flow rate ¹ :	3.09	m ³ /s	Atmospheric Temperature :	33.00 °C
Moisture Content :	2.77	%		

PARAMETER	TEST METHOD	TIME	RESULT ¹	UNIT
Oxides of Nitrogen	Absorption, Phenoldisulfonic Acid	09:10-09:15	5.5	mg/m ³
(NO _x as NO ₂)	(U.S. EPA Method 7)		2.9	ppm

REMARK:

- ¹ 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. Audomsub Jenjobjing (ว-003-จ-0009)

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

24/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

24/09/2024

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Request No. LA67-0929

Report No. 6709-0227

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ปล่องกระบวนการล้าง (PK-03) SAMPLE NO. : 03404
SAMPLING DATE : 14/09/2024 SAMPLING TIME : 09:00-09:30
RECEIVED DATE : 20/09/2024 REPORTED DATE : 24/09/2024
TESTED DATE : 20/09/2024
STACK DESCRIPTION @

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.70	m	Type of Fuel :	-
Temperature :	31.00	°C	Oxygen Content :	20.90 %
Air Velocity :	8.41	m/s	Barometric Pressure :	755.50 mmHg
Flow rate ² :	3.09	m ³ /s	Atmospheric Temperature :	33.00 °C
Moisture Content :	2.77	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Sulfur Dioxide	Absorption, Barium-Thorin	09:00-09:30	<3.4	1,310	mg/m ³
(SO ₂)	Titrimetric (U.S. EPA Method 6)		<1.3	500	ppm

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- ³ These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Audomsub Jenjobjing (จ-003-จ-0009)

Examined By.....

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

24/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(จ-003-ก-0012)

24/09/2024

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Request No. LA67-0929

Report No. 6709-0229

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ปล่องกระบวนการล้าง (PK-03)

SAMPLE NO. : 03406

SAMPLING DATE : 14/09/2024

SAMPLING TIME : 09:00-09:40

RECEIVED DATE : 20/09/2024

REPORTED DATE : 24/09/2024

TESTED DATE : 20/09/2024

STACK DESCRIPTION @

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.70	m	Type of Fuel :	-
Temperature :	31.00	°C	Oxygen Content :	20.90 %
Air Velocity :	8.41	m/s	Barometric Pressure :	755.50 mmHg
Flow rate ² :	3.09	m ³ /s	Atmospheric Temperature :	33.00 °C
Moisture Content :	2.77	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Sulfuric Acid	Isokinetic, Titrimetric	09:00-09:40	1.61	100	mg/m ³
(H ₂ SO ₄)	(U.S. EPA Method 8)		0.40	25	ppm

REMARK:

- 1.¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- 2.² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- 3.³ These Data Outside The Scope of The Registration of The Department of Industrial Works.
4. Sampling By Mr. Audomsub Jenjobjing (จ-003-จ-0009)

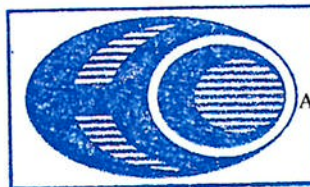
Examined By



(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

24/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Thongchai Boonsak)

(จ-003-ค-0012)

24/09/2024

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WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Request No. LA67-0929

Report No. 6709-0228

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ปล่องกระบวนกรล้าง (PK-03)

SAMPLE NO. : 03405

SAMPLING DATE : 14/09/2024

SAMPLING TIME : 09:00-09:30

RECEIVED DATE : 20/09/2024

REPORTED DATE : 24/09/2024

TESTED DATE : 20/09/2024

STACK DESCRIPTION

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.70	m	Type of Fuel :	-
Temperature :	31.00	°C	Oxygen Content :	20.90 %
Air Velocity :	8.41	m/s	Barometric Pressure :	755.50 mmHg
Flow rate ¹ :	3.09	m ³ /s	Atmospheric Temperature :	33.00 °C
Moisture Content :	2.77	%		

PARAMETER	TEST METHOD	TIME	RESULT ¹	UNIT
Nitric acid	Absorption, Ion Chromatography	09:00-09:30	0.653	mg/m ³
(HNO ₃)	(U.S.EPA Method 26A)		0.254	ppm

REMARK:

- ¹/ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Audomsub Jenjobjing
- Parameter Outside The Scope of The Registration of The Department of Industrial Works.



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Approved By.....

(Mr. Thongchai Boonsak)

24/09/2024

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COPY

Request No. LA67-0912

Report No. 6709-0177

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ปล่องกระบวนการล้าง (PK-07) SAMPLE NO. : 03267
SAMPLING DATE : 09/09/2024 SAMPLING TIME : 09:45-09:50
RECEIVED DATE : 11/09/2024 REPORTED DATE : 21/09/2024
TESTED DATE : 11-17/09/2024
STACK DESCRIPTION @

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.67	m	Type of Fuel :	-
Temperature :	30.00	°C	Oxygen Content :	20.90 %
Air Velocity :	5.05	m/s	Barometric Pressure :	754.75 mmHg
Flow rate ¹ :	1.69	m ³ /s	Atmospheric Temperature :	33.00 °C
Moisture Content :	2.92	%		

PARAMETER	TEST METHOD	TIME	RESULT ¹	UNIT
Oxides of Nitrogen	Absorption, Phenoldisulfonic Acid	09:45-09:50	<2.0	mg/m ³
(NO _x as NO ₂)	(U.S. EPA Method 7)		<1.0	ppm

REMARK:

- ¹ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- ² These Data Outside The Scope of The Registration of The Department of Industrial Works.
- Sampling By Mr. Warakorn Vitayaseewee (ว-003-ค-0021)

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

21/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

21/09/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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COPY

Request No. LA67-0912

Report No. 6709-0175

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ปล่องกระบวนการล้าง (PK-07)

SAMPLE NO. : 03265

SAMPLING DATE : 09/09/2024

SAMPLING TIME : 09:40-10:10

RECEIVED DATE : 11/09/2024

REPORTED DATE : 21/09/2024

TESTED DATE : 11-16/09/2024

STACK DESCRIPTION @

Height : 10.00 m

Type of Process : Exhaust

Diameter : 0.67 m

Type of Fuel : -

Temperature : 30.00 °C

Oxygen Content : 20.90 %

Air Velocity : 5.05 m/s

Barometric Pressure : 754.75 mmHg

Flow rate² : 1.69 m³/s

Atmospheric Temperature : 33.00 °C

Moisture Content : 2.92 %

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Sulfur Dioxide	Absorption, Barium-Thorin	09:40-10:10	<3.4	1,310	mg/m ³
(SO ₂)	Titrimetric (U.S. EPA Method 6)		<1.3	500	ppm

REMARK:

- 1.¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- 2.² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- 3.[@] These Data Outside The Scope of The Registration of The Department of Industrial Works.
4. Sampling By Mr. Warakorn Vitayaseewee (ว-003-ค-0021)

Examined By



(Miss Apiradee Chuen-arom)

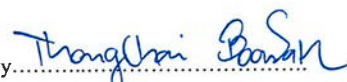
(ว-003-ค-0007)

21/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

21/09/2024

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Request No. LA67-0912

Report No. 6709-0176

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : ปล่องกระบวนการล้าง (PK-07) SAMPLE NO. : 03266
 SAMPLING DATE : 09/09/2024 SAMPLING TIME : 09:55-10:45
 RECEIVED DATE : 11/09/2024 REPORTED DATE : 21/09/2024
 TESTED DATE : 11-16/09/2024
 STACK DESCRIPTION@

Height :	10.00	m	Type of Process :	Exhaust
Diameter :	0.67	m	Type of Fuel :	-
Temperature :	30.00	°C	Oxygen Content :	20.90 %
Air Velocity :	5.05	m/s	Barometric Pressure :	754.75 mmHg
Flow rate ² :	1.69	m ³ /s	Atmospheric Temperature :	33.00 °C
Moisture Content :	2.92	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Sulfuric Acid	Isokinetic, Barium-Thorin Titrimetric	09:55-10:45	<0.05	100	mg/m ³
(H ₂ SO ₄)	(U.S. EPA Method 8)		<0.01	25	ppm

REMARK:

- 1.¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- 2.² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- 3.[@] These Data Outside The Scope of The Registration of The Department of Industrial Works.
4. Sampling By Mr. Warakorn Vitayasewee (1-003-ก-0021)

Examined By.....

(Miss Apiradee Chuen-arom)

(1-003-ก-0007)

21/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(1-003-ก-0012)

21/09/2024

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Request No. ATR6707074

Report No. 6707-1051 - 6707-1053

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
RECEIVED DATE : 30/07/2024 SAMPLE NO. : A67071051 - A67071053
TESTED DATE : 30/07/2024-01/08/2024 REPORTED DATE : 09/08/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{1/}	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	23-24/07/2024	0.056	0.33	mg/m ³
		24-25/07/2024	0.055	0.33	mg/m ³
		25-26/07/2024	0.072	0.33	mg/m ³

REMARK:

^{1/} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsoon)

09/08/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Request No. ATR6707074

Report No. 6707-1054 - 6707-1056

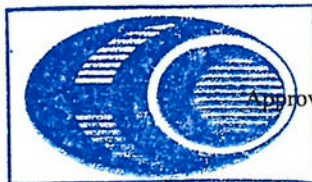
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
RECEIVED DATE : 30/07/2024 SAMPLE NO. : A67071054 - A67071056
TESTED DATE : 30/07/2024-08/08/2024 REPORTED DATE : 09/08/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	23-24/07/2024	< 0.0001	mg/m ³
		24-25/07/2024	< 0.0001	mg/m ³
		25-26/07/2024	< 0.0001	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsopon)

09/08/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Request No. ATR6709029

Report No. 6709-0591 - 6709-0593

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
RECEIVED DATE : 16/09/2024 SAMPLE NO. : A67090591 - A67090593
TESTED DATE : 16/09/2024-19/09/2024 REPORTED DATE : 26/09/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{1/}	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	09-10/09/2024	0.060	0.33	mg/m ³
		10-11/09/2024	0.061	0.33	mg/m ³
		11-12/09/2024	0.072	0.33	mg/m ³

REMARK:

^{1/} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsopon)

26/09/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Request No. ATR6709029

Report No. 6709-0594 - 6709-0596

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
RECEIVED DATE : 16/09/2024 SAMPLE NO. : A67090594 - A67090596
TESTED DATE : 16/09/2024-25/09/2024 REPORTED DATE : 26/09/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	09-10/09/2024	0.0001	mg/m ³
		10-11/09/2024	0.0006	mg/m ³
		11-12/09/2024	0.0001	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Sampling By Mr. Tummarat Photankhum)



Approved By

(Miss Thanatporn Klinsopon)

26/09/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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COPY

Request No. ATR6711062

Report No. 6711-1020 - 6711-1022

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
RECEIVED DATE : 27/11/2024 SAMPLE NO. : A67111020 - A67111022
TESTED DATE : 27/11/2024-28/11/2024 REPORTED DATE : 02/12/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{1/}	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	14-15/11/2024	0.090	0.33	mg/m ³
		15-16/11/2024	0.080	0.33	mg/m ³
		16-17/11/2024	0.067	0.33	mg/m ³

REMARK:

^{1/} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Apiwat Klangpetch)



Approved By



(Mr. Thongchai Boonsak)

02/12/2024

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

COPY

Request No. ATR6711062

Report No. 6711-1023 - 6711-1025

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
RECEIVED DATE : 27/11/2024 SAMPLE NO. : A67111023 - A67111025
TESTED DATE : 27/11/2024-30/11/2024 REPORTED DATE : 02/12/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	14-15/11/2024	< 0.0001	mg/m ³
		15-16/11/2024	0.0019	mg/m ³
		16-17/11/2024	< 0.0001	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Apiwat Klangpetch)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

Thongchai Boonsak

(Mr. Thongchai Boonsak)

02/12/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Request No. ATR6707074

Report No. 6707-1045 - 6707-1047

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
RECEIVED DATE : 30/07/2024 SAMPLE NO. : A67071045 - A67071047
TESTED DATE : 30/07/2024-01/08/2024 REPORTED DATE : 09/08/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ¹	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	23-24/07/2024	0.057	0.33	mg/m ³
		24-25/07/2024	0.055	0.33	mg/m ³
		25-26/07/2024	0.052	0.33	mg/m ³

REMARK:¹ Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsohon)

09/08/2024

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WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Request No. ATR6707074

Report No. 6707-1048 - 6707-1050

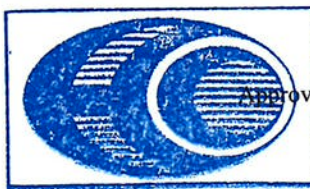
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
RECEIVED DATE : 30/07/2024 SAMPLE NO. : A67071048 - A67071050
TESTED DATE : 30/07/2024-08/08/2024 REPORTED DATE : 09/08/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration, ICP-OES Method	23-24/07/2024	< 0.0001	mg/m ³
		24-25/07/2024	< 0.0001	mg/m ³
		25-26/07/2024	< 0.0001	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsopon)

09/08/2024

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WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Request No. ATR6709029

Report No. 6709-0585 - 6709-0587

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
RECEIVED DATE : 16/09/2024 SAMPLE NO. : A67090585 - A67090587
TESTED DATE : 16/09/2024-19/09/2024 REPORTED DATE : 26/09/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{1/}	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	09-10/09/2024	0.063	0.33	mg/m ³
		10-11/09/2024	0.042	0.33	mg/m ³
		11-12/09/2024	0.036	0.33	mg/m ³

REMARK:^{1/} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Miss Thanatporn Klinsochon)

26/09/2024

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COPY

Request No. ATR6709029

Report No. 6709-0588 - 6709-0590

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
RECEIVED DATE : 16/09/2024 SAMPLE NO. : A67090588 - A67090590
TESTED DATE : 16/09/2024-25/09/2024 REPORTED DATE : 26/09/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	09-10/09/2024	0.0014	mg/m ³
		10-11/09/2024	< 0.0001	mg/m ³
		11-12/09/2024	< 0.0001	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsopon)

26/09/2024

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WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Request No. ATR6711062

Report No. 6711-1014 - 6711-1016

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
RECEIVED DATE : 27/11/2024 SAMPLE NO. : A67111014 - A67111016
TESTED DATE : 27/11/2024-28/11/2024 REPORTED DATE : 02/12/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{/1}	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	14-15/11/2024	0.085	0.33	mg/m ³
		15-16/11/2024	0.070	0.33	mg/m ³
		16-17/11/2024	0.068	0.33	mg/m ³

REMARK:

^{/1} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Apiwat Klangpetch)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Thongchai Boonsak)

02/12/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Request No. ATR6711062

Report No. 6711-1017 - 6711-1019

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
RECEIVED DATE : 27/11/2024 SAMPLE NO. : A67111017 - A67111019
TESTED DATE : 27/11/2024-30/11/2024 REPORTED DATE : 02/12/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	14-15/11/2024	0.0004	mg/m ³
		15-16/11/2024	< 0.0001	mg/m ³
		16-17/11/2024	< 0.0001	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Sampling By Mr. Apiwat Klangpetch)



Approved By

(Mr. Thongchai Boonsak)

02/12/2024

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WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Request No. ATR6707074

Report No. 6707-1057 - 6707-1059

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังท่าประมาณ 0.5 กม.
RECEIVED DATE : 30/07/2024 SAMPLE NO. : A67071057 - A67071059
TESTED DATE : 30/07/2024-01/08/2024 REPORTED DATE : 09/08/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{/1}	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	23-24/07/2024	0.067	0.33	mg/m ³
		24-25/07/2024	0.050	0.33	mg/m ³
		25-26/07/2024	0.080	0.33	mg/m ³

REMARK:^{/1} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsopon)

09/08/2024

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Request No. ATR6707074

Report No. 6707-1060 - 6707-1062

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังท่าประมาณ 0.5 กม.
RECEIVED DATE : 30/07/2024 SAMPLE NO. : A67071060 - A67071062
TESTED DATE : 30/07/2024-08/08/2024 REPORTED DATE : 09/08/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	23-24/07/2024	< 0.0001	mg/m ³
		24-25/07/2024	0.0013	mg/m ³
		25-26/07/2024	< 0.0001	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Tummarat Photankhum)



Approved By

(Miss Thanatporn Klinsopon)

09/08/2024

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Request No. ATR6709029

Report No. 6709-0597 - 6709-0599

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
RECEIVED DATE : 16/09/2024 SAMPLE NO. : A67090597 - A67090599
TESTED DATE : 16/09/2024-19/09/2024 REPORTED DATE : 26/09/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{/1}	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	09-10/09/2024	0.071	0.33	mg/m ³
		10-11/09/2024	0.085	0.33	mg/m ³
		11-12/09/2024	0.078	0.33	mg/m ³

REMARK:^{/1} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Tummarat Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Miss Thanatporn Klinsoyon)

26/09/2024

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Request No. ATR6709029

Report No. 6709-0600 - 6709-0602

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE NAME : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
RECEIVED DATE : 16/09/2024 SAMPLE NO. : A67090600 - A67090602
TESTED DATE : 16/09/2024-25/09/2024 REPORTED DATE : 26/09/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	09-10/09/2024	0.0004	mg/m ³
		10-11/09/2024	< 0.0001	mg/m ³
		11-12/09/2024	0.0004	mg/m ³

REMARK:

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Sampling By Mr. Tummarat Photankhum)



Approved By

(Miss Thanatporn Klinsopon)

26/09/2024

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Request No. ATR6711062

Report No. 6711-1026 - 6711-1028

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
RECEIVED DATE : 27/11/2024 SAMPLE NO. : A67111026 - A67111028
TESTED DATE : 27/11/2024-28/11/2024 REPORTED DATE : 02/12/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	STD ^{1/}	UNIT
Total Suspended Particulate (TSP)	Gravimetric Method	14-15/11/2024	0.113	0.33	mg/m ³
		15-16/11/2024	0.097	0.33	mg/m ³
		16-17/11/2024	0.094	0.33	mg/m ³

REMARK:

^{1/} Notification of The National Environmental Board Volume 24 B.E.2547 (2004) Standard for 24-hr Average.

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Sampling By Mr. Apiwat Klangpetch)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

Thongchai Boonsak

(Mr. Thongchai Boonsak)

02/12/2024

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Request No. ATR6711062

Report No. 6711-1029 - 6711-1031

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
RECEIVED DATE : 27/11/2024 SAMPLE NO. : A67111029 - A67111031
TESTED DATE : 27/11/2024-30/11/2024 REPORTED DATE : 02/12/2024

PARAMETER*	TEST METHOD	SAMPLING DATE	RESULT	UNIT
Zinc Oxide	Filtration,ICP-OES Method	14-15/11/2024	0.0007	mg/m ³
		15-16/11/2024	0.0005	mg/m ³
		16-17/11/2024	< 0.0001	mg/m ³

REMARK: * Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Sampling By Mr. Apiwat Klangpetch)

Approved By Thongchai Boonsak

(Mr. Thongchai Boonsak)

02/12/2024

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Request No. LA67-R0795

Report No. R6707-3620 - R6707-3622

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
 PARAMETER* : Nitrogen Dioxide SAMPLE NO. : 25326-25328
 DETERMINATION METHOD : Chemiluminescence SAMPLING DATE : 23-26/07/2024
 INSTRUMENT : API Model T200 S/N 7866 RECEIVED DATE : 26/07/2024
 REPORTED DATE : 30/07/2024

TIME / DATE	23-24/07/2024	24-25/07/2024	25-26/07/2024	UNIT
10:00 - 11:00 ^{1/2}	0.007	0.007	0.010	ppm
11:00 - 12:00	0.007	0.005	0.011	ppm
12:00 - 13:00	0.007	0.006	0.010	ppm
13:00 - 14:00	0.007	0.011	0.008	ppm
14:00 - 15:00	0.006	0.011	0.010	ppm
15:00 - 16:00	0.008	0.011	0.011	ppm
16:00 - 17:00	0.010	0.013	0.012	ppm
17:00 - 18:00	0.011	0.014	0.015	ppm
18:00 - 19:00	0.012	0.013	0.018	ppm
19:00 - 20:00	0.010	0.012	0.016	ppm
20:00 - 21:00	0.011	0.014	0.016	ppm
21:00 - 22:00	0.011	0.012	0.016	ppm
22:00 - 23:00	0.011	0.016	0.016	ppm
23:00 - 00:00	0.013	0.016	0.014	ppm
00:00 - 01:00	0.014	0.014	0.013	ppm
01:00 - 02:00	0.013	0.013	0.013	ppm
02:00 - 03:00	0.012	0.013	0.013	ppm
03:00 - 04:00	0.010	0.012	0.013	ppm
04:00 - 05:00	0.011	0.013	0.014	ppm
05:00 - 06:00	0.012	0.014	0.014	ppm
06:00 - 07:00	0.012	0.014	0.015	ppm
07:00 - 08:00	0.014	0.014	0.015	ppm
08:00 - 09:00	0.015	0.014	0.015	ppm
09:00 - 10:00	0.013	0.013	0.014	ppm
Maximum 1 hr.	0.015	0.016	0.018	ppm
Average 24 hr.	0.011	0.012	0.013	ppm
Standard (1 hr.) ^{1/}	0.17	0.17	0.17	ppm

REMARK : ^{1/} Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)^{1/2} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Photankhun)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

30/07/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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 WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Request No. LA67-R0938

Report No. R6709-1590 - R6709-1592

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
 PARAMETER* : Nitrogen Dioxide SAMPLE NO. : 32804-32806
 DETERMINATION METHOD : Chemiluminescence SAMPLING DATE : 09-12/09/2024
 INSTRUMENT : API Model T200 S/N 2004 RECEIVED DATE : 12/09/2024
 REPORTED DATE : 17/09/2024

TIME / DATE	09-10/09/2024	10-11/09/2024	11-12/09/2024	UNIT
10:00 - 11:00 ^{/2}	0.007	0.011	0.013	ppm
11:00 - 12:00	0.011	0.010	0.011	ppm
12:00 - 13:00	0.010	0.010	0.010	ppm
13:00 - 14:00	0.008	0.008	0.006	ppm
14:00 - 15:00	0.010	0.010	0.006	ppm
15:00 - 16:00	0.011	0.009	0.005	ppm
16:00 - 17:00	0.010	0.010	0.009	ppm
17:00 - 18:00	0.013	0.013	0.008	ppm
18:00 - 19:00	0.016	0.016	0.007	ppm
19:00 - 20:00	0.016	0.005	0.010	ppm
20:00 - 21:00	0.018	0.014	0.013	ppm
21:00 - 22:00	0.017	0.015	0.004	ppm
22:00 - 23:00	0.018	0.015	0.010	ppm
23:00 - 00:00	0.015	0.015	0.009	ppm
00:00 - 01:00	0.013	0.015	0.006	ppm
01:00 - 02:00	0.012	0.013	0.005	ppm
02:00 - 03:00	0.013	0.011	0.006	ppm
03:00 - 04:00	0.012	0.009	0.004	ppm
04:00 - 05:00	0.013	0.010	0.007	ppm
05:00 - 06:00	0.014	0.011	0.013	ppm
06:00 - 07:00	0.013	0.012	0.009	ppm
07:00 - 08:00	0.014	0.012	0.006	ppm
08:00 - 09:00	0.015	0.011	0.009	ppm
09:00 - 10:00	0.013	0.012	0.008	ppm
Maximum 1 hr.	0.018	0.016	0.013	ppm
Average 24 hr.	0.013	0.012	0.008	ppm
Standard (1 hr.) ^{/1}	0.17	0.17	0.17	ppm

REMARK : ^{/1} Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)^{/2} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Photankhura)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

17/09/2024

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COPY

Request No. LA67-R11193

Report No. R6711-6453 - R6711-6455

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
PARAMETER* : Nitrogen Dioxide SAMPLE NO. : 47354-47356
DETERMINATION METHOD : Chemiluminescence SAMPLING DATE : 14-17/11/2024
INSTRUMENT : API Model T200 S/N 6756 RECEIVED DATE : 17/11/2024
REPORTED DATE : 27/11/2024

TIME / DATE	14-15/11/2024	15-16/11/2024	16-17/11/2024	UNIT
10:00 - 11:00 ^{/2}	0.026	0.020	0.019	ppm
11:00 - 12:00	0.024	0.025	0.021	ppm
12:00 - 13:00	0.016	0.016	0.021	ppm
13:00 - 14:00	0.019	0.013	0.027	ppm
14:00 - 15:00	0.029	0.019	0.032	ppm
15:00 - 16:00	0.022	0.018	0.025	ppm
16:00 - 17:00	0.026	0.027	0.019	ppm
17:00 - 18:00	0.024	0.031	0.030	ppm
18:00 - 19:00	0.027	0.033	0.029	ppm
19:00 - 20:00	0.033	0.031	0.028	ppm
20:00 - 21:00	0.027	0.030	0.028	ppm
21:00 - 22:00	0.029	0.028	0.022	ppm
22:00 - 23:00	0.026	0.026	0.024	ppm
23:00 - 00:00	0.029	0.023	0.022	ppm
00:00 - 01:00	0.025	0.021	0.020	ppm
01:00 - 02:00	0.024	0.021	0.018	ppm
02:00 - 03:00	0.021	0.020	0.017	ppm
03:00 - 04:00	0.019	0.018	0.015	ppm
04:00 - 05:00	0.018	0.018	0.015	ppm
05:00 - 06:00	0.016	0.018	0.014	ppm
06:00 - 07:00	0.016	0.016	0.014	ppm
07:00 - 08:00	0.016	0.018	0.014	ppm
08:00 - 09:00	0.021	0.020	0.016	ppm
09:00 - 10:00	0.021	0.015	0.016	ppm
Maximum 1 hr.	0.033	0.033	0.032	ppm
Average 24 hr.	0.023	0.022	0.021	ppm
Standard (1 hr.) ^{/1}	0.17	0.17	0.17	ppm

REMARK :

^{/1} Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)^{/2} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

27/11/2024

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Request No. LA67-R0795

Report No. R6707-3614 - R6707-3616

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
PARAMETER* : Nitrogen Dioxide
DETERMINATION METHOD : Chemiluminescence
INSTRUMENT : API Model M200E S/N 3998

SAMPLE NO. : 25320-25322
SAMPLING DATE : 23-26/07/2024
RECEIVED DATE : 26/07/2024
REPORTED DATE : 30/07/2024

TIME / DATE	23-24/07/2024	24-25/07/2024	25-26/07/2024	UNIT
09:00 - 10:00 ^{/2}	0.006	0.012	0.011	ppm
10:00 - 11:00	0.009	0.012	0.010	ppm
11:00 - 12:00	0.008	0.012	0.010	ppm
12:00 - 13:00	0.008	0.010	0.009	ppm
13:00 - 14:00	0.006	0.010	0.007	ppm
14:00 - 15:00	0.006	0.011	0.010	ppm
15:00 - 16:00	0.008	0.012	0.011	ppm
16:00 - 17:00	0.011	0.013	0.012	ppm
17:00 - 18:00	0.011	0.015	0.015	ppm
18:00 - 19:00	0.014	0.015	0.023	ppm
19:00 - 20:00	0.010	0.011	0.015	ppm
20:00 - 21:00	0.010	0.013	0.016	ppm
21:00 - 22:00	0.011	0.013	0.018	ppm
22:00 - 23:00	0.009	0.013	0.016	ppm
23:00 - 00:00	0.012	0.016	0.016	ppm
00:00 - 01:00	0.015	0.015	0.015	ppm
01:00 - 02:00	0.014	0.014	0.015	ppm
02:00 - 03:00	0.013	0.012	0.014	ppm
03:00 - 04:00	0.008	0.013	0.011	ppm
04:00 - 05:00	0.008	0.014	0.014	ppm
05:00 - 06:00	0.009	0.014	0.015	ppm
06:00 - 07:00	0.009	0.014	0.015	ppm
07:00 - 08:00	0.011	0.013	0.013	ppm
08:00 - 09:00	0.014	0.013	0.016	ppm
Maximum 1 hr.	0.015	0.016	0.023	ppm
Average 24 hr.	0.010	0.013	0.014	ppm
Standard (1 hr.) ^{/1}	0.17	0.17	0.17	ppm

REMARK : ^{/1} Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)^{/2} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Photankham)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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WITHOUT THE WRITTEN APPROVAL LABORATORY

Approved By.....

(MS. THANATPORN KLINSOPON)

30/07/2024

COPY

Request No. LA67-R0938

Report No. R6709-1584 - R6709-1586

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
PARAMETER* : Nitrogen Dioxide
DETERMINATION METHOD : Chemiluminescence
INSTRUMENT : API Model T200 S/N 7875

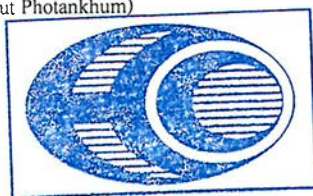
SAMPLE NO. : 32798-32800
SAMPLING DATE : 09-12/09/2024
RECEIVED DATE : 12/09/2024
REPORTED DATE : 17/09/2024

TIME / DATE	09-10/09/2024	10-11/09/2024	11-12/09/2024	UNIT
09:00 - 10:00 ^{/2}	0.003	0.002	0.002	ppm
10:00 - 11:00	0.002	0.002	0.002	ppm
11:00 - 12:00	0.002	0.002	0.002	ppm
12:00 - 13:00	0.002	0.001	0.002	ppm
13:00 - 14:00	0.001	0.002	0.001	ppm
14:00 - 15:00	0.002	0.002	0.002	ppm
15:00 - 16:00	0.002	0.002	0.003	ppm
16:00 - 17:00	0.002	0.002	0.003	ppm
17:00 - 18:00	0.002	0.003	0.003	ppm
18:00 - 19:00	0.003	0.003	0.004	ppm
19:00 - 20:00	0.003	0.004	0.003	ppm
20:00 - 21:00	0.004	0.004	0.004	ppm
21:00 - 22:00	0.004	0.003	0.004	ppm
22:00 - 23:00	0.004	0.002	0.004	ppm
23:00 - 00:00	0.004	0.002	0.004	ppm
00:00 - 01:00	0.003	0.003	0.003	ppm
01:00 - 02:00	0.003	0.003	0.002	ppm
02:00 - 03:00	0.002	0.003	0.003	ppm
03:00 - 04:00	0.002	0.003	0.003	ppm
04:00 - 05:00	0.002	0.003	0.003	ppm
05:00 - 06:00	0.002	0.003	0.003	ppm
06:00 - 07:00	0.003	0.003	0.003	ppm
07:00 - 08:00	0.003	0.003	0.003	ppm
08:00 - 09:00	0.002	0.002	0.003	ppm
Maximum 1 hr.	0.004	0.004	0.004	ppm
Average 24 hr.	0.002	0.002	0.003	ppm
Standard (1 hr.) ^{/1}	0.17	0.17	0.17	ppm

REMARK :

^{/1} Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)^{/2} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Photankhum)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(MS. THANATPORN KLINSOPON)

17/09/2024

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Request No. LA67-R11193

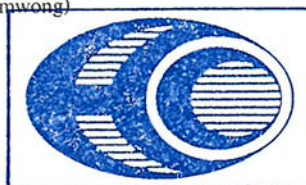
Report No. R6711-6441 - R6711-6443

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
PARAMETER* : Nitrogen Dioxide
DETERMINATION METHOD : Chemiluminescence
INSTRUMENT : API Model T200 S/N 7875

SAMPLE NO. : 47342-47344
SAMPLING DATE : 14-17/11/2024
RECEIVED DATE : 17/11/2024
REPORTED DATE : 27/11/2024

TIME / DATE	14-15/11/2024	15-16/11/2024	16-17/11/2024	UNIT
09:00 - 10:00 ^{/2}	0.006	0.016	0.013	ppm
10:00 - 11:00	0.013	0.013	0.012	ppm
11:00 - 12:00	0.014	0.014	0.013	ppm
12:00 - 13:00	0.012	0.011	0.011	ppm
13:00 - 14:00	0.011	0.008	0.009	ppm
14:00 - 15:00	0.015	0.013	0.010	ppm
15:00 - 16:00	0.015	0.010	0.009	ppm
16:00 - 17:00	0.014	0.015	0.009	ppm
17:00 - 18:00	0.013	0.018	0.011	ppm
18:00 - 19:00	0.012	0.023	0.012	ppm
19:00 - 20:00	0.015	0.024	0.012	ppm
20:00 - 21:00	0.017	0.023	0.014	ppm
21:00 - 22:00	0.017	0.022	0.014	ppm
22:00 - 23:00	0.017	0.022	0.014	ppm
23:00 - 00:00	0.020	0.021	0.016	ppm
00:00 - 01:00	0.019	0.020	0.015	ppm
01:00 - 02:00	0.018	0.019	0.013	ppm
02:00 - 03:00	0.017	0.018	0.013	ppm
03:00 - 04:00	0.016	0.017	0.013	ppm
04:00 - 05:00	0.016	0.017	0.012	ppm
05:00 - 06:00	0.015	0.016	0.012	ppm
06:00 - 07:00	0.015	0.015	0.012	ppm
07:00 - 08:00	0.015	0.016	0.012	ppm
08:00 - 09:00	0.017	0.017	0.012	ppm
Maximum 1 hr.	0.020	0.024	0.016	ppm
Average 24 hr.	0.015	0.017	0.012	ppm
Standard (1 hr.) ^{/1}	0.17	0.17	0.17	ppm

REMARK : ^{/1} Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)^{/2} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

27/11/2024

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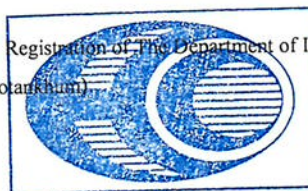
Request No. LA67-R0795

Report No. R6707-3626 - R6707-3628

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
 PARAMETER* : Nitrogen Dioxide SAMPLE NO. : 25332-25334
 DETERMINATION METHOD : Chemiluminescence SAMPLING DATE : 23-26/07/2024
 INSTRUMENT : API Model M200E S/N 4084 RECEIVED DATE : 26/07/2024
 REPORTED DATE : 30/07/2024

TIME / DATE	23-24/07/2024	24-25/07/2024	25-26/07/2024	UNIT
11:00 - 12:00 ^{/2}	0.007	0.008	0.008	ppm
12:00 - 13:00	0.007	0.007	0.009	ppm
13:00 - 14:00	0.008	0.007	0.008	ppm
14:00 - 15:00	0.007	0.007	0.008	ppm
15:00 - 16:00	0.006	0.008	0.009	ppm
16:00 - 17:00	0.007	0.008	0.011	ppm
17:00 - 18:00	0.007	0.009	0.011	ppm
18:00 - 19:00	0.008	0.009	0.014	ppm
19:00 - 20:00	0.005	0.008	0.014	ppm
20:00 - 21:00	0.006	0.008	0.015	ppm
21:00 - 22:00	0.005	0.009	0.016	ppm
22:00 - 23:00	0.005	0.009	0.017	ppm
23:00 - 00:00	0.007	0.010	0.016	ppm
00:00 - 01:00	0.009	0.010	0.015	ppm
01:00 - 02:00	0.008	0.010	0.016	ppm
02:00 - 03:00	0.007	0.009	0.014	ppm
03:00 - 04:00	0.006	0.009	0.013	ppm
04:00 - 05:00	0.005	0.009	0.015	ppm
05:00 - 06:00	0.006	0.010	0.017	ppm
06:00 - 07:00	0.006	0.010	0.017	ppm
07:00 - 08:00	0.007	0.011	0.018	ppm
08:00 - 09:00	0.009	0.011	0.016	ppm
09:00 - 10:00	0.009	0.009	0.015	ppm
10:00 - 11:00	0.008	0.009	0.016	ppm
Maximum 1 hr.	0.009	0.011	0.018	ppm
Average 24 hr.	0.007	0.009	0.014	ppm
Standard (1 hr.) ^{/1}	0.17	0.17	0.17	ppm

REMARK : ^{/1} Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)^{/2} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Photakham)

Approved By.....

(MS. THANATPORN KLINSOPON)

30/07/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Request No. LA67-R0938

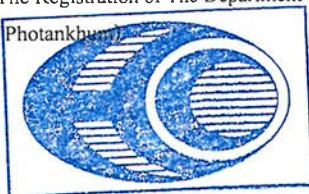
Report No. R6709-1596 - R6709-1598

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
 PARAMETER* : Nitrogen Dioxide SAMPLE NO. : 32810-32812
 DETERMINATION METHOD : Chemiluminescence SAMPLING DATE : 09-12/09/2024
 INSTRUMENT : API Model M200E S/N 3998 RECEIVED DATE : 12/09/2024
 REPORTED DATE : 17/09/2024

TIME / DATE	09-10/09/2024	10-11/09/2024	11-12/09/2024	UNIT
11:00 - 12:00 ¹²	0.008	0.012	0.011	ppm
12:00 - 13:00	0.009	0.009	0.011	ppm
13:00 - 14:00	0.009	0.009	0.009	ppm
14:00 - 15:00	0.008	0.011	0.012	ppm
15:00 - 16:00	0.011	0.011	0.013	ppm
16:00 - 17:00	0.012	0.014	0.016	ppm
17:00 - 18:00	0.014	0.016	0.016	ppm
18:00 - 19:00	0.017	0.015	0.015	ppm
19:00 - 20:00	0.018	0.017	0.016	ppm
20:00 - 21:00	0.020	0.015	0.014	ppm
21:00 - 22:00	0.016	0.013	0.012	ppm
22:00 - 23:00	0.018	0.010	0.011	ppm
23:00 - 00:00	0.014	0.007	0.011	ppm
00:00 - 01:00	0.010	0.007	0.011	ppm
01:00 - 02:00	0.009	0.005	0.010	ppm
02:00 - 03:00	0.011	0.006	0.009	ppm
03:00 - 04:00	0.011	0.012	0.008	ppm
04:00 - 05:00	0.011	0.014	0.008	ppm
05:00 - 06:00	0.013	0.010	0.011	ppm
06:00 - 07:00	0.012	0.010	0.014	ppm
07:00 - 08:00	0.015	0.012	0.013	ppm
08:00 - 09:00	0.014	0.013	0.014	ppm
09:00 - 10:00	0.011	0.014	0.019	ppm
10:00 - 11:00	0.011	0.012	0.011	ppm
Maximum 1 hr.	0.020	0.017	0.019	ppm
Average 24 hr.	0.013	0.011	0.012	ppm
Standard (1 hr.) ¹¹	0.17	0.17	0.17	ppm

REMARK :

¹¹ Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)¹² Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Photankhurn)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

17/09/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Request No. LA67-R11193

Report No. R6711-6447 - R6711-6449

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
PARAMETER* : Nitrogen Dioxide
DETERMINATION METHOD : Chemiluminescence
INSTRUMENT : API Model M200E S/N 3998

SAMPLE NO. : 47348-47350
SAMPLING DATE : 14-17/11/2024
RECEIVED DATE : 17/11/2024
REPORTED DATE : 27/11/2024

TIME / DATE	14-15/11/2024	15-16/11/2024	16-17/11/2024	UNIT
10:00 - 11:00 ^{1/2}	0.007	0.005	0.008	ppm
11:00 - 12:00	0.006	0.006	0.017	ppm
12:00 - 13:00	0.007	0.005	0.018	ppm
13:00 - 14:00	0.008	0.006	0.018	ppm
14:00 - 15:00	0.011	0.006	0.018	ppm
15:00 - 16:00	0.015	0.008	0.018	ppm
16:00 - 17:00	0.015	0.008	0.016	ppm
17:00 - 18:00	0.014	0.007	0.013	ppm
18:00 - 19:00	0.008	0.009	0.014	ppm
19:00 - 20:00	0.009	0.009	0.026	ppm
20:00 - 21:00	0.008	0.008	0.030	ppm
21:00 - 22:00	0.008	0.007	0.017	ppm
22:00 - 23:00	0.008	0.008	0.013	ppm
23:00 - 00:00	0.009	0.007	0.010	ppm
00:00 - 01:00	0.009	0.006	0.008	ppm
01:00 - 02:00	0.007	0.007	0.007	ppm
02:00 - 03:00	0.006	0.007	0.006	ppm
03:00 - 04:00	0.006	0.008	0.008	ppm
04:00 - 05:00	0.004	0.005	0.006	ppm
05:00 - 06:00	0.004	0.006	0.008	ppm
06:00 - 07:00	0.004	0.007	0.008	ppm
07:00 - 08:00	0.004	0.007	0.006	ppm
08:00 - 09:00	0.004	0.008	0.006	ppm
09:00 - 10:00	0.004	0.008	0.005	ppm
Maximum 1 hr.	0.015	0.009	0.030	ppm
Average 24 hr.	0.008	0.007	0.013	ppm
Standard (1 hr.) ^{1/1}	0.17	0.17	0.17	ppm

REMARK : ^{1/1} Notification of The National Environmental Board Volume 33 B.E. 2552 (2009)^{1/2} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)

บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

27/11/2024

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WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Request No. LA67-R0795

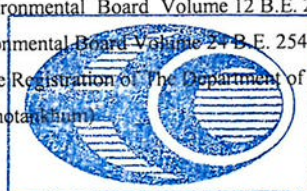
Report No. R6707-3617 - R6707-3619

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
 PARAMETER* : Sulfur Dioxide SAMPLE NO. : 25323-25325
 DETERMINATION METHOD : UV-Fluorescence SAMPLING DATE : 23-26/07/2024
 INSTRUMENT : API Model T100 S/N 6457 RECEIVED DATE : 26/07/2024
 REPORTED DATE : 30/07/2024

TIME / DATE	23-24/07/2024	24-25/07/2024	25-26/07/2024	UNIT
10:00 - 11:00 ^{1/}	0.001	0.003	0.004	ppm
11:00 - 12:00	0.003	0.004	0.004	ppm
12:00 - 13:00	0.003	0.006	0.004	ppm
13:00 - 14:00	0.005	0.009	0.004	ppm
14:00 - 15:00	0.003	0.002	0.004	ppm
15:00 - 16:00	0.003	0.003	0.004	ppm
16:00 - 17:00	0.002	0.004	0.004	ppm
17:00 - 18:00	0.003	0.004	0.004	ppm
18:00 - 19:00	0.003	0.003	0.004	ppm
19:00 - 20:00	0.003	0.003	0.004	ppm
20:00 - 21:00	0.003	0.003	0.004	ppm
21:00 - 22:00	0.003	0.003	0.004	ppm
22:00 - 23:00	0.003	0.003	0.004	ppm
23:00 - 00:00	0.003	0.004	0.004	ppm
00:00 - 01:00	0.004	0.004	0.004	ppm
01:00 - 02:00	0.004	0.004	0.004	ppm
02:00 - 03:00	0.004	0.004	0.004	ppm
03:00 - 04:00	0.004	0.004	0.004	ppm
04:00 - 05:00	0.004	0.004	0.004	ppm
05:00 - 06:00	0.004	0.004	0.004	ppm
06:00 - 07:00	0.004	0.004	0.004	ppm
07:00 - 08:00	0.004	0.004	0.004	ppm
08:00 - 09:00	0.004	0.004	0.005	ppm
09:00 - 10:00	0.004	0.004	0.004	ppm
Maximum 1 hr.	0.005	0.009	0.005	ppm
Average 24 hr.	0.003	0.004	0.004	ppm
Standard (1 hr.) ^{1/}	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ^{1/2}	0.12	0.12	0.12	ppm

REMARK : ^{1/} Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)
^{1/2} Notification of The National Environmental Board Volume 24 B.E. 2547 (2004) ^{1/3} Start Time
 * Parameter Outside The Scope of The Registration of The Department of Industrial Works
 (Measurement By Mr. Tummarut Photakham)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MS. THANATPORN KLINSOPON)

30/07/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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 WITHOUT THE WRITTEN APPROVAL LABORATORY

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Request No. LA67-R0938

Report No. R6709-1587 - R6709-1589

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
 PARAMETER* : Sulfur Dioxide SAMPLE NO. : 32801-32803
 DETERMINATION METHOD : UV-Fluorescence SAMPLING DATE : 09-12/09/2024
 INSTRUMENT : API Model T100 S/N 6458 RECEIVED DATE : 12/09/2024
 REPORTED DATE : 17/09/2024

TIME / DATE	09-10/09/2024	10-11/09/2024	11-12/09/2024	UNIT
10:00 - 11:00 ^{/3}	0.004	0.005	0.004	ppm
11:00 - 12:00	0.005	0.005	0.004	ppm
12:00 - 13:00	0.002	0.005	0.005	ppm
13:00 - 14:00	0.003	0.005	0.004	ppm
14:00 - 15:00	0.004	0.004	0.004	ppm
15:00 - 16:00	0.004	0.004	0.004	ppm
16:00 - 17:00	0.004	0.005	0.004	ppm
17:00 - 18:00	0.004	0.005	0.004	ppm
18:00 - 19:00	0.004	0.004	0.004	ppm
19:00 - 20:00	0.004	0.004	0.004	ppm
20:00 - 21:00	0.004	0.004	0.004	ppm
21:00 - 22:00	0.004	0.004	0.004	ppm
22:00 - 23:00	0.004	0.004	0.004	ppm
23:00 - 00:00	0.004	0.004	0.004	ppm
00:00 - 01:00	0.004	0.004	0.004	ppm
01:00 - 02:00	0.004	0.004	0.004	ppm
02:00 - 03:00	0.004	0.004	0.004	ppm
03:00 - 04:00	0.004	0.004	0.004	ppm
04:00 - 05:00	0.004	0.004	0.004	ppm
05:00 - 06:00	0.004	0.004	0.004	ppm
06:00 - 07:00	0.004	0.004	0.004	ppm
07:00 - 08:00	0.005	0.005	0.004	ppm
08:00 - 09:00	0.005	0.005	0.005	ppm
09:00 - 10:00	0.004	0.004	0.004	ppm
Maximum 1 hr.	0.005	0.005	0.005	ppm
Average 24 hr.	0.004	0.004	0.004	ppm
Standard (1 hr.) ^{/1}	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ^{/2}	0.12	0.12	0.12	ppm

REMARK :

^{/1} Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)^{/2} Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)^{/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Phetnuchum)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

17/09/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Request No. LA67-R11193

Report No. R6711-6450 - R6711-6452

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออกของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.
PARAMETER* : Sulfur Dioxide SAMPLE NO. : 47351-47353
DETERMINATION METHOD : UV-Fluorescence SAMPLING DATE : 14-17/11/2024
INSTRUMENT : API Model M100E S/N 3139 RECEIVED DATE : 17/11/2024
REPORTED DATE : 27/11/2024

TIME / DATE	14-15/11/2024	15-16/11/2024	16-17/11/2024	UNIT
10:00 - 11:00 ^{/3}	0.007	0.007	0.007	ppm
11:00 - 12:00	0.007	0.007	0.007	ppm
12:00 - 13:00	0.007	0.007	0.007	ppm
13:00 - 14:00	0.007	0.007	0.007	ppm
14:00 - 15:00	0.007	0.007	0.007	ppm
15:00 - 16:00	0.007	0.007	0.007	ppm
16:00 - 17:00	0.007	0.007	0.007	ppm
17:00 - 18:00	0.007	0.007	0.007	ppm
18:00 - 19:00	0.007	0.007	0.007	ppm
19:00 - 20:00	0.007	0.007	0.007	ppm
20:00 - 21:00	0.008	0.007	0.007	ppm
21:00 - 22:00	0.007	0.007	0.007	ppm
22:00 - 23:00	0.007	0.007	0.007	ppm
23:00 - 00:00	0.007	0.007	0.007	ppm
00:00 - 01:00	0.007	0.007	0.007	ppm
01:00 - 02:00	0.007	0.007	0.007	ppm
02:00 - 03:00	0.007	0.007	0.007	ppm
03:00 - 04:00	0.007	0.007	0.007	ppm
04:00 - 05:00	0.007	0.007	0.007	ppm
05:00 - 06:00	0.007	0.007	0.007	ppm
06:00 - 07:00	0.007	0.007	0.007	ppm
07:00 - 08:00	0.007	0.007	0.007	ppm
08:00 - 09:00	0.007	0.007	0.007	ppm
09:00 - 10:00	0.007	0.007	0.007	ppm
Maximum 1 hr.	0.008	0.007	0.007	ppm
Average 24 hr.	0.007	0.007	0.007	ppm
Standard (1 hr.) ^{/1}	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ^{/2}	0.12	0.12	0.12	ppm

REMARK :

^{/1} Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)^{/2} Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)^{/3} Start Time* Parameter Outside The Scope of The Regulation of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)

Approved By.....

(MS. THANATPORN KLINSOPON)

27/11/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
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Request No. LA67-R0795

Report No. R6707-3611 - R6707-3613

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
 PARAMETER* : Sulfur Dioxide
 DETERMINATION METHOD : UV-Fluorescence
 INSTRUMENT : API Model T100 S/N 6459

SAMPLE NO. : 25317-25319
 SAMPLING DATE : 23-26/07/2024
 RECEIVED DATE : 26/07/2024
 REPORTED DATE : 30/07/2024

TIME / DATE	23-24/07/2024	24-25/07/2024	25-26/07/2024	UNIT
09:00 - 10:00 ^{/3}	0.008	0.005	0.008	ppm
10:00 - 11:00	0.012	0.005	0.009	ppm
11:00 - 12:00	0.011	0.006	0.009	ppm
12:00 - 13:00	0.009	0.006	0.010	ppm
13:00 - 14:00	0.008	0.006	0.009	ppm
14:00 - 15:00	0.007	0.007	0.010	ppm
15:00 - 16:00	0.005	0.009	0.008	ppm
16:00 - 17:00	0.005	0.010	0.007	ppm
17:00 - 18:00	0.005	0.005	0.008	ppm
18:00 - 19:00	0.008	0.006	0.007	ppm
19:00 - 20:00	0.011	0.006	0.006	ppm
20:00 - 21:00	0.005	0.005	0.007	ppm
21:00 - 22:00	0.003	0.006	0.005	ppm
22:00 - 23:00	0.007	0.006	0.005	ppm
23:00 - 00:00	0.005	0.005	0.005	ppm
00:00 - 01:00	0.005	0.006	0.004	ppm
01:00 - 02:00	0.008	0.005	0.005	ppm
02:00 - 03:00	0.003	0.006	0.004	ppm
03:00 - 04:00	0.004	0.006	0.004	ppm
04:00 - 05:00	0.004	0.006	0.005	ppm
05:00 - 06:00	0.004	0.006	0.005	ppm
06:00 - 07:00	0.009	0.005	0.009	ppm
07:00 - 08:00	0.010	0.007	0.005	ppm
08:00 - 09:00	0.005	0.011	0.008	ppm
Maximum 1 hr.	0.012	0.011	0.010	ppm
Average 24 hr.	0.007	0.006	0.007	ppm
Standard (1 hr.) ^{/1}	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ^{/2}	0.12	0.12	0.12	ppm

REMARK : ^{/1} Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)^{/2} Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)^{/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Photanastorn)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

30/07/2024

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Request No. LA67-R0938

Report No. R6709-1581 - R6709-1583

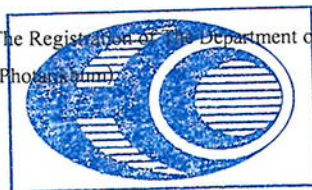
TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
PARAMETER* : Sulfur Dioxide
DETERMINATION METHOD : UV-Fluorescence
INSTRUMENT : API Model T100 S/N 5701

SAMPLE NO. : 32795-32797
SAMPLING DATE : 09-12/09/2024
RECEIVED DATE : 12/09/2024
REPORTED DATE : 17/09/2024

TIME / DATE	09-10/09/2024	10-11/09/2024	11-12/09/2024	UNIT
09:00 - 10:00 ^{/3}	0.013	0.013	0.027	ppm
10:00 - 11:00	0.015	0.015	0.032	ppm
11:00 - 12:00	0.010	0.019	0.027	ppm
12:00 - 13:00	0.014	0.024	0.032	ppm
13:00 - 14:00	0.013	0.030	0.025	ppm
14:00 - 15:00	0.016	0.030	0.026	ppm
15:00 - 16:00	0.017	0.026	0.031	ppm
16:00 - 17:00	0.010	0.023	0.029	ppm
17:00 - 18:00	0.009	0.026	0.027	ppm
18:00 - 19:00	0.008	0.025	0.025	ppm
19:00 - 20:00	0.006	0.023	0.022	ppm
20:00 - 21:00	0.006	0.019	0.022	ppm
21:00 - 22:00	0.006	0.021	0.021	ppm
22:00 - 23:00	0.005	0.015	0.020	ppm
23:00 - 00:00	0.005	0.015	0.013	ppm
00:00 - 01:00	0.005	0.014	0.018	ppm
01:00 - 02:00	0.005	0.014	0.013	ppm
02:00 - 03:00	0.005	0.016	0.013	ppm
03:00 - 04:00	0.003	0.018	0.015	ppm
04:00 - 05:00	0.003	0.019	0.017	ppm
05:00 - 06:00	0.009	0.021	0.014	ppm
06:00 - 07:00	0.013	0.026	0.026	ppm
07:00 - 08:00	0.014	0.027	0.030	ppm
08:00 - 09:00	0.009	0.026	0.030	ppm
Maximum 1 hr.	0.017	0.030	0.032	ppm
Average 24 hr.	0.009	0.021	0.023	ppm
Standard (1 hr.) ^{/1}	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ^{/2}	0.12	0.12	0.12	ppm

REMARK :

^{/1} Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)^{/2} Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)^{/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Photanasum)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

17/09/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Request No. LA67-R11193

Report No. R6711-6438 - R6711-6440

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง
PARAMETER* : Sulfur Dioxide
DETERMINATION METHOD : UV-Fluorescence
INSTRUMENT : API Model T100 S/N 1607

SAMPLE NO. : 47339-47341
SAMPLING DATE : 14-17/11/2024
RECEIVED DATE : 17/11/2024
REPORTED DATE : 27/11/2024

TIME / DATE	14-15/11/2024	15-16/11/2024	16-17/11/2024	UNIT
09:00 - 10:00 ^{/3}	0.003	0.003	0.003	ppm
10:00 - 11:00	0.003	0.003	0.003	ppm
11:00 - 12:00	0.003	0.003	0.003	ppm
12:00 - 13:00	0.004	0.003	0.003	ppm
13:00 - 14:00	0.004	0.003	0.003	ppm
14:00 - 15:00	0.003	0.003	0.003	ppm
15:00 - 16:00	0.003	0.003	0.003	ppm
16:00 - 17:00	0.003	0.003	0.003	ppm
17:00 - 18:00	0.003	0.003	0.003	ppm
18:00 - 19:00	0.003	0.003	0.003	ppm
19:00 - 20:00	0.003	0.002	0.003	ppm
20:00 - 21:00	0.003	0.002	0.003	ppm
21:00 - 22:00	0.003	0.002	0.003	ppm
22:00 - 23:00	0.003	0.002	0.003	ppm
23:00 - 00:00	0.003	0.002	0.003	ppm
00:00 - 01:00	0.003	0.003	0.003	ppm
01:00 - 02:00	0.003	0.003	0.003	ppm
02:00 - 03:00	0.003	0.002	0.003	ppm
03:00 - 04:00	0.003	0.002	0.003	ppm
04:00 - 05:00	0.003	0.003	0.003	ppm
05:00 - 06:00	0.003	0.003	0.003	ppm
06:00 - 07:00	0.003	0.003	0.003	ppm
07:00 - 08:00	0.003	0.003	0.003	ppm
08:00 - 09:00	0.003	0.002	0.003	ppm
Maximum 1 hr.	0.004	0.003	0.003	ppm
Average 24 hr.	0.003	0.003	0.003	ppm
Standard (1 hr.) ^{/1}	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ^{/2}	0.12	0.12	0.12	ppm

REMARK :

^{/1} Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)^{/2} Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)^{/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemwong)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

27/11/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Request No. LA67-R0795

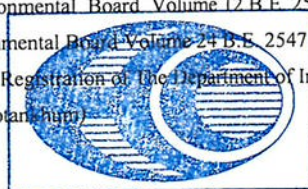
Report No. R6707-3623 - R6707-3625

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
 PARAMETER* : Sulfur Dioxide SAMPLE NO. : 25329-25331
 DETERMINATION METHOD : UV-Fluorescence SAMPLING DATE : 23-26/07/2024
 INSTRUMENT : API Model T100 S/N 5700 RECEIVED DATE : 26/07/2024
 REPORTED DATE : 30/07/2024

TIME / DATE	23-24/07/2024	24-25/07/2024	25-26/07/2024	UNIT
11:00 - 12:00 ¹³	0.004	0.008	0.008	ppm
12:00 - 13:00	0.006	0.008	0.008	ppm
13:00 - 14:00	0.005	0.008	0.008	ppm
14:00 - 15:00	0.006	0.008	0.008	ppm
15:00 - 16:00	0.007	0.008	0.009	ppm
16:00 - 17:00	0.007	0.008	0.009	ppm
17:00 - 18:00	0.008	0.008	0.009	ppm
18:00 - 19:00	0.008	0.008	0.008	ppm
19:00 - 20:00	0.008	0.008	0.008	ppm
20:00 - 21:00	0.007	0.008	0.008	ppm
21:00 - 22:00	0.007	0.008	0.008	ppm
22:00 - 23:00	0.007	0.008	0.008	ppm
23:00 - 00:00	0.007	0.008	0.008	ppm
00:00 - 01:00	0.007	0.008	0.008	ppm
01:00 - 02:00	0.007	0.008	0.008	ppm
02:00 - 03:00	0.007	0.008	0.008	ppm
03:00 - 04:00	0.007	0.008	0.008	ppm
04:00 - 05:00	0.008	0.008	0.008	ppm
05:00 - 06:00	0.008	0.008	0.008	ppm
06:00 - 07:00	0.008	0.008	0.008	ppm
07:00 - 08:00	0.008	0.008	0.008	ppm
08:00 - 09:00	0.008	0.008	0.008	ppm
09:00 - 10:00	0.008	0.008	0.008	ppm
10:00 - 11:00	0.008	0.008	0.008	ppm
Maximum 1 hr.	0.008	0.008	0.009	ppm
Average 24 hr.	0.007	0.008	0.008	ppm
Standard (1 hr.) ¹¹	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ¹²	0.12	0.12	0.12	ppm

REMARK :

¹¹ Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)¹² Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)¹³ Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Pholam-huay)

Approved By.....

(MS. THANATPORN KLINSOPON)

30/07/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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COPY

Request No. LA67-R0938

Report No. R6709-1593 - R6709-1595

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
 PARAMETER* : Sulfur Dioxide SAMPLE NO. : 32807-32809
 DETERMINATION METHOD : UV-Fluorescence SAMPLING DATE : 09-12/09/2024
 INSTRUMENT : API Model T100 S/N 5702 RECEIVED DATE : 12/09/2024
 REPORTED DATE : 17/09/2024

TIME / DATE	09-10/09/2024	10-11/09/2024	11-12/09/2024	UNIT
11:00 - 12:00 ^{/3}	0.012	0.014	0.014	ppm
12:00 - 13:00	0.014	0.011	0.011	ppm
13:00 - 14:00	0.012	0.012	0.012	ppm
14:00 - 15:00	0.012	0.013	0.013	ppm
15:00 - 16:00	0.012	0.013	0.013	ppm
16:00 - 17:00	0.012	0.013	0.013	ppm
17:00 - 18:00	0.013	0.013	0.013	ppm
18:00 - 19:00	0.013	0.013	0.013	ppm
19:00 - 20:00	0.013	0.014	0.014	ppm
20:00 - 21:00	0.011	0.012	0.011	ppm
21:00 - 22:00	0.012	0.012	0.012	ppm
22:00 - 23:00	0.012	0.013	0.013	ppm
23:00 - 00:00	0.012	0.013	0.012	ppm
00:00 - 01:00	0.012	0.013	0.012	ppm
01:00 - 02:00	0.012	0.013	0.012	ppm
02:00 - 03:00	0.012	0.013	0.013	ppm
03:00 - 04:00	0.013	0.014	0.014	ppm
04:00 - 05:00	0.011	0.012	0.012	ppm
05:00 - 06:00	0.012	0.012	0.012	ppm
06:00 - 07:00	0.012	0.013	0.013	ppm
07:00 - 08:00	0.013	0.013	0.013	ppm
08:00 - 09:00	0.013	0.013	0.013	ppm
09:00 - 10:00	0.012	0.013	0.013	ppm
10:00 - 11:00	0.013	0.013	0.012	ppm
Maximum 1 hr.	0.014	0.014	0.014	ppm
Average 24 hr.	0.012	0.013	0.013	ppm
Standard (1 hr.) ^{/1}	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ^{/2}	0.12	0.12	0.12	ppm

REMARK :

^{/1} Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)^{/2} Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)^{/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Mr. Tummarut Photanrhum)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. THANATPORN KLINSOPON)

17/09/2024

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Request No. LA67-R11193

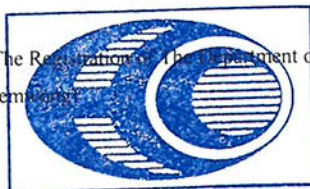
Report No. R6711-6444 - R6711-6446

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบังห่างประมาณ 0.5 กม.
 PARAMETER* : Sulfur Dioxide SAMPLE NO. : 47345-47347
 DETERMINATION METHOD : UV-Fluorescence SAMPLING DATE : 14-17/11/2024
 INSTRUMENT : API Model MI00E S/N 3137 RECEIVED DATE : 17/11/2024
 REPORTED DATE : 27/11/2024

TIME / DATE	14-15/11/2024	15-16/11/2024	16-17/11/2024	UNIT
10:00 - 11:00 ¹³	0.003	0.003	0.003	ppm
11:00 - 12:00	0.003	0.003	0.003	ppm
12:00 - 13:00	0.003	0.003	0.003	ppm
13:00 - 14:00	0.003	0.003	0.003	ppm
14:00 - 15:00	0.003	0.003	0.003	ppm
15:00 - 16:00	0.003	0.003	0.003	ppm
16:00 - 17:00	0.003	0.003	0.003	ppm
17:00 - 18:00	0.003	0.003	0.003	ppm
18:00 - 19:00	0.003	0.003	0.003	ppm
19:00 - 20:00	0.003	0.003	0.003	ppm
20:00 - 21:00	0.003	0.003	0.003	ppm
21:00 - 22:00	0.003	0.003	0.003	ppm
22:00 - 23:00	0.003	0.003	0.003	ppm
23:00 - 00:00	0.003	0.003	0.003	ppm
00:00 - 01:00	0.003	0.003	0.003	ppm
01:00 - 02:00	0.003	0.003	0.003	ppm
02:00 - 03:00	0.003	0.003	0.003	ppm
03:00 - 04:00	0.003	0.003	0.003	ppm
04:00 - 05:00	0.003	0.003	0.003	ppm
05:00 - 06:00	0.003	0.003	0.003	ppm
06:00 - 07:00	0.003	0.003	0.003	ppm
07:00 - 08:00	0.003	0.003	0.003	ppm
08:00 - 09:00	0.003	0.003	0.003	ppm
09:00 - 10:00	0.003	0.003	0.003	ppm
Maximum 1 hr.	0.003	0.003	0.003	ppm
Average 24 hr.	0.003	0.003	0.003	ppm
Standard (1 hr.) ¹¹	0.30	0.30	0.30	ppm
Standard (Average 24 hr.) ¹²	0.12	0.12	0.12	ppm

REMARK :

¹¹ Notification of The National Environmental Board Volume 12 B.E. 2538 (1995) and Volume 21 B.E. 2544 (2001)¹² Notification of The National Environmental Board Volume 24 B.E. 2547 (2004)¹³ Start Time* Parameter Outside The Scope of The Regulation of The Department of Industrial Works
(Measurement By Mr. Seksan Pluemkang)

Approved By.....

(MS. THANATPORN KLINSOPON)

27/11/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด
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Wind Speed & Wind Direction

Request No. LA67-R0795

Siam Poongsan Metal Co., Ltd.

Sample No. 25336

Sampling Source : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออก

ของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.

Sampling Date : July 23-26, 2024

Time	July 23-24, 2024		July 24-25, 2024		July 25-26, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
10:00-11:00	0.4	WNW	0.4	SSW	0.4	SW
11:00-12:00	0.4	WNW	1.3	W	1.3	WSW
12:00-13:00	0.4	WNW	0.9	SW	1.3	WSW
13:00-14:00	0.9	WNW	0.4	SW	1.3	WSW
14:00-15:00	0.9	WNW	0.4	SSW	1.3	WSW
15:00-16:00	0.9	WNW	0.4	SW	1.3	WSW
16:00-17:00	0.4	S	0.4	SSW	0.4	SW
17:00-18:00	0.4	SSW	0.4	SSW	0.4	SSW
18:00-19:00	0.4	WNW	0.4	S	0.0	-
19:00-20:00	1.3	WNW	0.4	SW	0.4	SSW
20:00-21:00	0.9	W	0.4	SSW	0.0	-
21:00-22:00	0.9	SSW	0.4	SW	0.0	-
22:00-23:00	0.9	SSW	0.4	SSW	0.0	-
23:00-00:00	0.4	SSW	0.0	-	0.4	E
00:00-01:00	0.4	SSW	0.0	-	0.0	-
01:00-02:00	0.4	SSW	0.0	-	0.0	-
02:00-03:00	0.9	SSW	0.4	S	0.4	S
03:00-04:00	0.9	W	0.0	-	0.4	SSW
04:00-05:00	0.9	SSW	0.0	-	0.0	-
05:00-06:00	1.3	W	0.0	-	0.0	-
06:00-07:00	1.3	WSW	0.0	-	0.0	-
07:00-08:00	0.9	SSW	0.0	-	0.0	-
08:00-09:00	0.4	SSW	0.4	SSW	0.0	-
09:00-10:00	0.4	SSW	0.4	SW	0.0	-

COPY

Wind Speed & Wind Direction

Request No. LA67-R0938

Siam Poongsan Metal Co., Ltd.

Sample No. 32814

Sampling Source : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออก

ของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.

Sampling Date : September 9-12, 2024

Time	September 9-10, 2024		September 10-11, 2024		September 11-12, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
10:00-11:00	0.4	WSW	0.4	W	0.4	WSW
11:00-12:00	0.9	WSW	0.4	WSW	0.9	WSW
12:00-13:00	0.9	WSW	0.4	WSW	1.3	WSW
13:00-14:00	0.9	WSW	0.4	WSW	1.3	WSW
14:00-15:00	1.8	WSW	0.9	WSW	0.9	W
15:00-16:00	0.9	WSW	0.4	WSW	0.0	-
16:00-17:00	0.4	WSW	0.4	WSW	0.0	-
17:00-18:00	0.9	WSW	0.4	WSW	0.0	-
18:00-19:00	0.4	W	0.0	-	0.0	-
19:00-20:00	0.0	-	0.0	-	0.0	-
20:00-21:00	0.0	-	0.0	-	0.0	-
21:00-22:00	0.0	-	0.0	-	0.0	-
22:00-23:00	0.0	-	0.0	-	0.0	-
23:00-00:00	0.0	-	0.0	-	0.0	-
00:00-01:00	0.0	-	0.0	-	0.4	WSW
01:00-02:00	0.0	-	0.0	-	1.8	NE
02:00-03:00	0.4	WSW	0.0	-	1.3	NE
03:00-04:00	0.4	W	0.0	-	0.4	NE
04:00-05:00	0.4	WSW	0.0	-	0.0	-
05:00-06:00	0.4	WSW	0.0	-	0.0	-
06:00-07:00	0.4	WSW	0.0	-	0.0	-
07:00-08:00	0.4	W	0.0	-	0.0	-
08:00-09:00	0.4	WSW	0.0	-	0.4	ENE
09:00-10:00	0.9	WSW	0.4	W	0.4	WSW

Wind Speed & Wind Direction

Request No. LA67-R11193

Siam Poongsan Metal Co., Ltd.

Sample No. 47357

Sampling Source : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออก

ของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.

Sampling Date : November 14-17, 2024

Time	November 14-15, 2024		November 15-16, 2024		November 16-17, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
10:00-11:00	1.3	NNW	0.9	SE	0.4	SE
11:00-12:00	1.3	ENE	1.3	S	1.3	SW
12:00-13:00	0.4	SE	2.2	SW	2.2	WSW
13:00-14:00	0.9	ENE	2.2	SW	1.8	SW
14:00-15:00	1.3	SSW	1.8	WSW	1.8	SW
15:00-16:00	2.2	WSW	1.8	ENE	1.8	S
16:00-17:00	3.1	WSW	0.0	-	1.8	SW
17:00-18:00	2.2	SW	0.9	ENE	1.8	SSE
18:00-19:00	0.9	SE	0.9	NE	1.3	S
19:00-20:00	0.4	SE	0.4	ENE	0.9	S
20:00-21:00	0.4	SE	0.4	ENE	0.4	SSE
21:00-22:00	0.4	ENE	0.4	ENE	0.4	S
22:00-23:00	0.4	ENE	0.4	ENE	0.0	-
23:00-00:00	0.9	ENE	0.0	-	0.4	ENE
00:00-01:00	0.4	ENE	0.4	ENE	0.4	ENE
01:00-02:00	0.9	ENE	0.4	ENE	0.9	ENE
02:00-03:00	0.4	ENE	0.9	ENE	0.4	ENE
03:00-04:00	0.0	-	0.4	ENE	0.0	-
04:00-05:00	0.4	ENE	0.4	ENE	0.4	ENE
05:00-06:00	0.9	ENE	0.4	ENE	0.4	ENE
06:00-07:00	0.9	ENE	0.4	ENE	0.9	ENE
07:00-08:00	0.4	ENE	0.4	ENE	0.4	ENE
08:00-09:00	0.4	ENE	1.3	ENE	0.4	ENE
09:00-10:00	0.4	SE	0.4	SE	0.4	SE

COPY

Wind Speed & Wind Direction

Request No. LA67-R0795

Siam Poongsan Metal Co., Ltd.

Sample No. 25335

Sampling Source : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง

Sampling Date : July 23-26, 2024

Time	July 23-24, 2024		July 24-25, 2024		July 25-26, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
09:00-10:00	1.8	WSW	2.7	W	2.2	W
10:00-11:00	2.2	W	2.7	W	2.2	WNW
11:00-12:00	2.2	W	3.6	W	2.7	NNW
12:00-13:00	2.7	WSW	3.1	W	3.1	NW
13:00-14:00	3.1	WSW	2.7	W	3.1	NW
14:00-15:00	2.7	WSW	3.1	W	3.6	NW
15:00-16:00	2.7	W	2.7	W	3.1	NW
16:00-17:00	2.7	WSW	2.7	W	1.3	NNW
17:00-18:00	2.7	WSW	2.7	W	1.8	W
18:00-19:00	2.2	W	2.2	W	1.3	W
19:00-20:00	2.7	W	2.7	W	1.8	W
20:00-21:00	3.1	W	2.2	W	1.8	WSW
21:00-22:00	2.7	W	1.8	W	1.8	W
22:00-23:00	2.2	W	1.8	W	1.8	W
23:00-00:00	2.2	W	1.8	W	2.2	W
00:00-01:00	1.8	W	2.2	W	1.8	WSW
01:00-02:00	1.3	W	1.8	W	1.8	WSW
02:00-03:00	1.8	W	2.7	W	2.2	W
03:00-04:00	1.8	W	2.2	W	2.2	W
04:00-05:00	1.8	W	1.8	W	1.8	W
05:00-06:00	1.8	W	1.8	W	1.3	WSW
06:00-07:00	2.2	W	1.8	W	1.8	W
07:00-08:00	2.2	W	2.2	W	1.3	W
08:00-09:00	1.8	W	2.7	W	1.3	W

COPY

Wind Speed & Wind Direction

Request No. LA67-R0938

Siam Poongsan Metal Co., Ltd.

Sample No. 32813

Sampling Source : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง

Sampling Date : September 9-12, 2024

Time	September 9-10, 2024		September 10-11, 2024		September 11-12, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
09:00-10:00	2.2	WSW	2.2	W	1.3	WSW
10:00-11:00	2.7	WSW	2.2	W	1.8	WSW
11:00-12:00	2.7	WSW	2.2	WSW	2.2	WSW
12:00-13:00	2.7	W	2.7	WSW	2.7	W
13:00-14:00	2.7	WSW	2.7	WSW	2.7	W
14:00-15:00	2.7	W	2.2	W	2.2	W
15:00-16:00	2.2	W	2.2	W	1.3	WSW
16:00-17:00	2.2	WSW	1.8	WSW	1.3	WSW
17:00-18:00	1.8	WSW	1.8	WSW	0.9	SW
18:00-19:00	1.8	WSW	1.3	WSW	0.4	SW
19:00-20:00	1.3	WSW	1.3	WSW	0.9	SW
20:00-21:00	0.4	WSW	0.9	SW	0.4	SSW
21:00-22:00	0.4	SW	0.4	SW	0.4	SSW
22:00-23:00	0.4	WSW	0.0	-	0.0	-
23:00-00:00	0.4	SW	0.0	-	0.4	SW
00:00-01:00	0.0	-	0.4	SW	0.4	SW
01:00-02:00	0.4	SW	0.4	SW	1.8	NE
02:00-03:00	1.8	WSW	0.0	-	0.9	ENE
03:00-04:00	1.3	W	0.0	-	0.4	E
04:00-05:00	1.3	W	0.4	SW	0.4	SSE
05:00-06:00	1.3	W	0.0	-	0.4	SSE
06:00-07:00	1.3	WSW	0.4	SW	0.0	-
07:00-08:00	1.3	WSW	0.9	W	0.0	-
08:00-09:00	1.8	WSW	0.9	WSW	0.4	SSE

Wind Speed & Wind Direction

Request No. LA67-R11193

Siam Poongsan Metal Co., Ltd.

Sample No. 47359

Sampling Source : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง

Sampling Date : November 14-17, 2024

Time	November 14-15, 2024		November 15-16, 2024		November 16-17, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
09:00-10:00	0.4	N	0.0	-	0.0	-
10:00-11:00	0.4	N	0.0	-	0.0	-
11:00-12:00	0.9	N	0.9	SSW	0.9	SSW
12:00-13:00	0.0	-	1.3	SSW	1.3	SSW
13:00-14:00	0.4	SW	1.8	SSW	1.3	SSW
14:00-15:00	1.3	SSW	1.3	SSW	1.8	SSW
15:00-16:00	1.8	SSW	0.0	-	1.3	SSW
16:00-17:00	1.8	SSW	0.0	-	0.4	SSW
17:00-18:00	0.9	SSW	0.0	-	0.9	SSW
18:00-19:00	0.0	-	0.0	-	0.4	SSW
19:00-20:00	0.0	-	0.0	-	0.0	-
20:00-21:00	0.0	-	0.0	-	0.0	-
21:00-22:00	0.0	-	0.0	-	0.0	-
22:00-23:00	0.0	-	0.0	-	0.0	-
23:00-00:00	0.0	-	0.0	-	0.0	-
00:00-01:00	0.0	-	0.0	-	0.0	-
01:00-02:00	0.0	-	0.0	-	0.0	-
02:00-03:00	0.0	-	0.0	-	0.0	-
03:00-04:00	0.0	-	0.0	-	0.0	-
04:00-05:00	0.0	-	0.0	-	0.0	-
05:00-06:00	0.0	-	0.0	-	0.0	-
06:00-07:00	0.0	-	0.0	-	0.0	-
07:00-08:00	0.0	-	0.0	-	0.0	-
08:00-09:00	0.0	-	0.0	-	0.0	-

COPY

Wind Speed & Wind Direction

Request No. LA67-R0795

Siam Poongsan Metal Co., Ltd.

Sample No. 25337

Sampling Source : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง ห่างประมาณ 0.5 กม.

Sampling Date : July 23-26, 2024

Time	July 23-24, 2024		July 24-25, 2024		July 25-26, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
11:00-12:00	1.8	SSE	2.2	SSE	1.8	WNW
12:00-13:00	1.8	SSE	2.2	S	1.3	NW
13:00-14:00	2.2	SSE	1.8	S	1.8	NW
14:00-15:00	1.8	SSE	2.2	S	1.8	NW
15:00-16:00	1.8	SSE	1.8	S	1.3	NW
16:00-17:00	2.2	SSE	1.3	S	0.9	WNW
17:00-18:00	1.8	SSE	1.8	S	0.9	WNW
18:00-19:00	1.8	S	1.3	S	0.4	S
19:00-20:00	1.8	S	1.3	WNW	0.9	S
20:00-21:00	1.3	S	0.9	S	0.9	S
21:00-22:00	1.3	S	0.9	WNW	0.9	S
22:00-23:00	1.3	S	0.9	S	0.9	S
23:00-00:00	1.3	S	0.9	S	1.3	S
00:00-01:00	0.9	S	0.9	S	0.9	S
01:00-02:00	0.4	SSW	1.3	S	0.4	SSE
02:00-03:00	0.9	S	1.3	S	1.3	S
03:00-04:00	0.9	W	1.3	S	0.9	S
04:00-05:00	0.9	WNW	0.9	S	0.9	SSW
05:00-06:00	0.9	S	0.9	S	0.4	S
06:00-07:00	0.9	S	0.9	S	0.9	SSW
07:00-08:00	1.3	S	0.4	S	0.4	SSW
08:00-09:00	0.9	S	1.3	S	0.4	WNW
09:00-10:00	1.8	S	1.3	S	0.0	-
10:00-11:00	2.2	S	1.8	S	0.4	WNW



Wind Speed & Wind Direction

Request No. LA67-R0938

Siam Poongsan Metal Co., Ltd.

Sample No. 32815

Sampling Source : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง ห่างประมาณ 0.5 กม.

Sampling Date : September 9-12, 2024

Time	September 9-10, 2024		September 10-11, 2024		September 11-12, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
11:00-12:00	1.3	SSW	1.3	S	0.9	S
12:00-13:00	1.3	SSW	2.7	S	1.3	N
13:00-14:00	1.3	SSW	3.1	SSW	1.8	NW
14:00-15:00	1.8	NNW	0.9	S	0.9	S
15:00-16:00	0.9	SSW	0.9	S	0.4	S
16:00-17:00	0.9	S	0.4	S	0.4	S
17:00-18:00	0.4	S	0.4	S	0.4	S
18:00-19:00	0.4	S	0.4	S	0.0	-
19:00-20:00	0.4	S	0.4	S	0.4	SSE
20:00-21:00	0.0	-	0.0	-	0.0	-
21:00-22:00	0.0	-	0.0	-	0.0	-
22:00-23:00	0.0	-	0.0	-	0.0	-
23:00-00:00	0.0	-	0.0	-	0.0	-
00:00-01:00	0.0	-	0.0	-	0.0	-
01:00-02:00	0.0	-	0.0	-	1.3	SE
02:00-03:00	0.0	-	0.0	-	0.4	SSE
03:00-04:00	0.4	S	0.0	-	0.0	-
04:00-05:00	0.4	S	0.0	-	0.0	-
05:00-06:00	0.4	S	0.0	-	0.0	-
06:00-07:00	0.4	S	0.0	-	0.0	-
07:00-08:00	0.4	S	0.0	-	0.0	-
08:00-09:00	0.9	S	0.0	-	0.4	ENE
09:00-10:00	0.9	S	0.4	S	0.9	N
10:00-11:00	1.3	S	0.9	S	0.4	NE

Wind Speed & Wind Direction

Request No. LA67-R11193

Siam Poongsan Metal Co., Ltd.

Sample No. 47358

Sampling Source : บริเวณเขตรัฐกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง ห่างประมาณ 0.5 กม.

Sampling Date : November 14-17, 2024

Time	November 14-15, 2024		November 15-16, 2024		November 16-17, 2024	
	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction	Wind Speed (m/s)	Wind Direction
10:00-11:00	0.4	WSW	0.9	WSW	0.4	WSW
11:00-12:00	0.9	SSW	1.3	WSW	0.9	NE
12:00-13:00	0.4	W	1.8	WSW	1.8	NNE
13:00-14:00	0.4	SW	2.2	NE	1.8	NNE
14:00-15:00	1.3	N	1.8	NNE	1.8	NE
15:00-16:00	1.8	NNE	0.4	SSW	1.8	NNE
16:00-17:00	2.7	NE	0.4	SW	1.8	N
17:00-18:00	1.3	N	0.4	SW	1.8	W
18:00-19:00	0.9	WSW	0.4	WSW	1.3	WSW
19:00-20:00	0.9	SW	0.0	-	0.9	WSW
20:00-21:00	0.4	SW	0.0	-	0.4	WSW
21:00-22:00	0.0	-	0.0	-	0.4	WSW
22:00-23:00	0.0	-	0.0	-	0.4	WSW
23:00-00:00	0.0	-	0.0	-	0.0	-
00:00-01:00	0.0	-	0.0	-	0.0	-
01:00-02:00	0.0	-	0.0	-	0.0	-
02:00-03:00	0.0	-	0.0	-	0.0	-
03:00-04:00	0.0	-	0.0	-	0.0	-
04:00-05:00	0.0	-	0.0	-	0.0	-
05:00-06:00	0.0	-	0.0	-	0.0	-
06:00-07:00	0.0	-	0.0	-	0.0	-
07:00-08:00	0.0	-	0.0	-	0.0	-
08:00-09:00	0.0	-	0.0	-	0.0	-
09:00-10:00	0.4	SSW	0.0	-	0.4	WSW

COPY

Wind Speed & Wind Direction

Request No. LA67-R0795

Siam Poongsan Metal Co., Ltd.

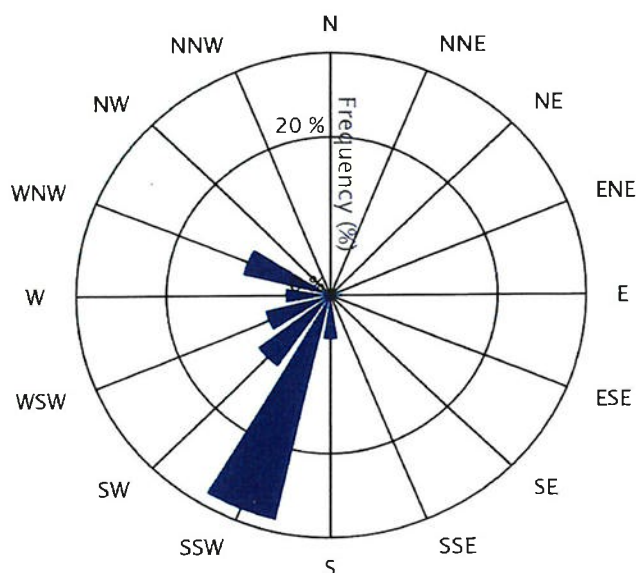
Sample No. 25336

Sampling Source : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออก

ของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.

Sampling Date : July 23-26, 2024

Calm 27.8 %



■ 0.4-1.9
 ■ 2.0-3.9
 ■ 4.0-5.9
 ■ 6.0-7.9
 ■ 8.0-9.9
 ■ > 9.9 (m/s)

WD/WS	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.4-1.9 m/s	2.0-3.9 m/s	4.0-5.9 m/s	6.0-7.9 m/s	8.0-9.9 m/s	> 9.9 m/s	
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	1.4	0.0	0.0	0.0	0.0	0.0	1.4
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	5.6	0.0	0.0	0.0	0.0	0.0	5.6
SSW	29.2	0.0	0.0	0.0	0.0	0.0	29.2
SW	11.1	0.0	0.0	0.0	0.0	0.0	11.1
WSW	8.3	0.0	0.0	0.0	0.0	0.0	8.3
W	5.6	0.0	0.0	0.0	0.0	0.0	5.6
WNW	11.1	0.0	0.0	0.0	0.0	0.0	11.1
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calm	27.8						

COPY

Wind Speed & Wind Direction

Request No. LA67-R0938

Siam Poongsan Metal Co., Ltd.

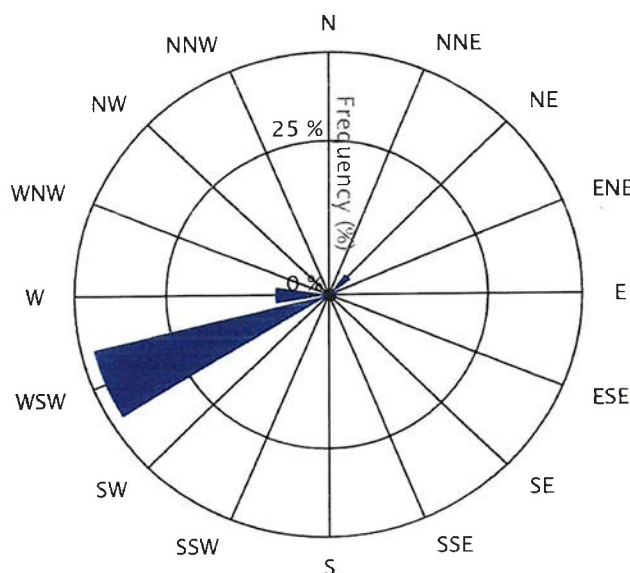
Sample No. 32814

Sampling Source : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออก

ของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.

Sampling Date : September 9-12, 2024

Calm 48.6 %



0.4-1.9
 2.0-3.9
 4.0-5.9
 6.0-7.9
 8.0-9.9
 > 9.9 (m/s)

WD/WS	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.4-1.9 m/s	2.0-3.9 m/s	4.0-5.9 m/s	6.0-7.9 m/s	8.0-9.9 m/s	> 9.9 m/s	
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	4.2	0.0	0.0	0.0	0.0	0.0	4.2
ENE	1.4	0.0	0.0	0.0	0.0	0.0	1.4
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	37.5	0.0	0.0	0.0	0.0	0.0	37.5
W	8.3	0.0	0.0	0.0	0.0	0.0	8.3
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	51.4	0.0	0.0	0.0	0.0	0.0	

Wind Speed & Wind Direction

Request No. LA67-R11193

Siam Poongsan Metal Co., Ltd.

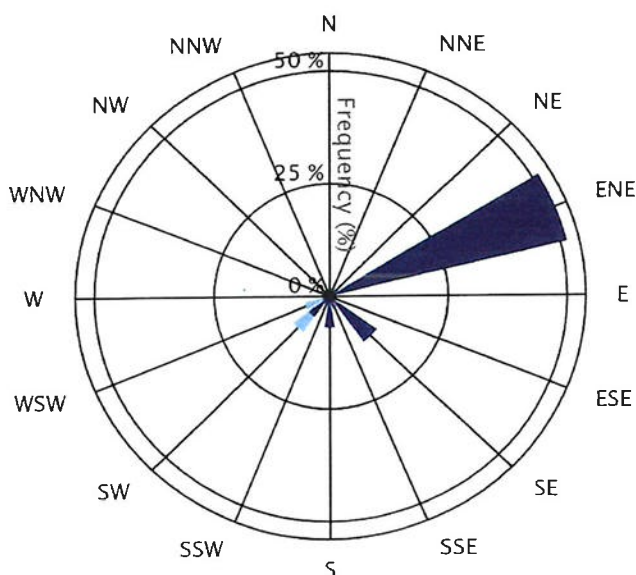
Sample No. 47357

Sampling Source : บริเวณที่ทำการย่อยเขตอุตสาหกรรมส่งออก

ของนิคมอุตสาหกรรมแหลมฉบัง ประมาณ 1 กม.

Sampling Date : November 14-17, 2024

Calm 6.9 %


 0.4-1.9
 2.0-3.9
 4.0-5.9
 6.0-7.9
 8.0-9.9
 > 9.9 (m/s)

WD/WS	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.4-1.9 m/s	2.0-3.9 m/s	4.0-5.9 m/s	6.0-7.9 m/s	8.0-9.9 m/s	> 9.9 m/s	
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	1.4	0.0	0.0	0.0	0.0	0.0	1.4
ENE	51.4	0.0	0.0	0.0	0.0	0.0	51.4
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	12.5	0.0	0.0	0.0	0.0	0.0	12.5
SSE	2.8	0.0	0.0	0.0	0.0	0.0	2.8
S	6.9	0.0	0.0	0.0	0.0	0.0	6.9
SSW	1.4	0.0	0.0	0.0	0.0	0.0	1.4
SW	5.6	4.2	0.0	0.0	0.0	0.0	9.8
WSW	1.4	4.2	0.0	0.0	0.0	0.0	5.6
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	1.4	0.0	0.0	0.0	0.0	0.0	1.4
Total	84.7	8.3	0.0	0.0	0.0	0.0	

Wind Speed & Wind Direction

Request No. LA67-R0795

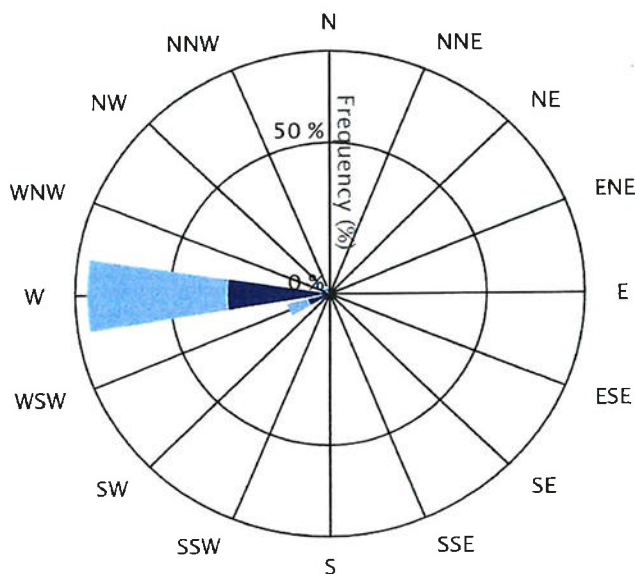
Siam Poongsan Metal Co., Ltd.

Sample No. 25335

Sampling Source : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง

Sampling Date : July 23-26, 2024

Calm 0.0 %



0.4-1.9
 2.0-3.9
 4.0-5.9
 6.0-7.9
 8.0-9.9
 > 9.9 (m/s)

WD/WS	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.4-1.9 m/s	2.0-3.9 m/s	4.0-5.9 m/s	6.0-7.9 m/s	8.0-9.9 m/s	> 9.9 m/s	
N	5.6	0.0	0.0	0.0	0.0	0.0	5.6
NNE	2.8	0.0	0.0	0.0	0.0	0.0	2.8
NE	4.2	0.0	0.0	0.0	0.0	0.0	4.2
ENE	20.8	2.8	0.0	0.0	0.0	0.0	23.6
E	1.4	0.0	0.0	0.0	0.0	0.0	1.4
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	12.5	1.4	0.0	0.0	0.0	0.0	13.9
SSE	9.7	1.4	0.0	0.0	0.0	0.0	11.1
S	1.4	1.4	0.0	0.0	0.0	0.0	2.8
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	5.6	5.6	0.0	0.0	0.0	0.0	11.2
W	1.4	2.8	0.0	0.0	0.0	0.0	4.2
WNW	1.4	1.4	0.0	0.0	0.0	0.0	2.8
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	4.2	0.0	0.0	0.0	0.0	0.0	4.2
Calm	0.0						

COPY

Wind Speed & Wind Direction

Request No. LA67-R0938

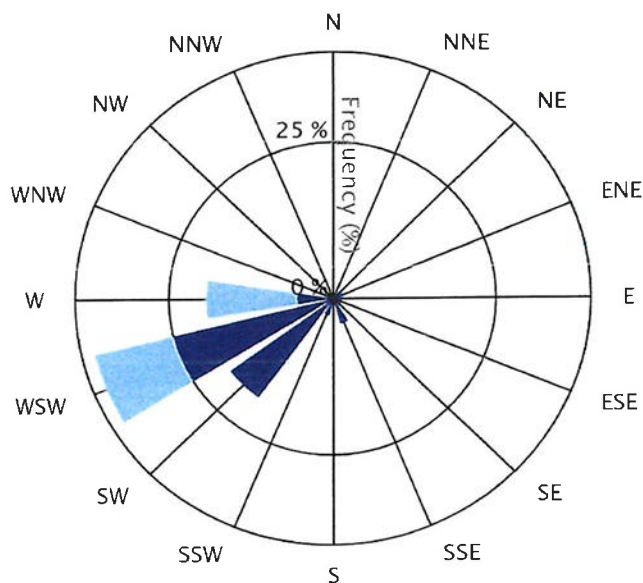
Siam Poongsan Metal Co., Ltd.

Sample No. 32813

Sampling Source : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง

Sampling Date : September 9-12, 2024

Calm 12.5 %



0.4-1.9
 2.0-3.9
 4.0-5.9
 6.0-7.9
 8.0-9.9
 > 9.9 (m/s)

WD/WS	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.4-1.9 m/s	2.0-3.9 m/s	4.0-5.9 m/s	6.0-7.9 m/s	8.0-9.9 m/s	> 9.9 m/s	
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	1.4	0.0	0.0	0.0	0.0	0.0	1.4
ENE	1.4	0.0	0.0	0.0	0.0	0.0	1.4
E	1.4	0.0	0.0	0.0	0.0	0.0	1.4
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	4.2	0.0	0.0	0.0	0.0	0.0	4.2
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	2.8	0.0	0.0	0.0	0.0	0.0	2.8
SW	19.4	0.0	0.0	0.0	0.0	0.0	19.4
WSW	25.0	12.5	0.0	0.0	0.0	0.0	37.5
W	5.6	13.9	0.0	0.0	0.0	0.0	19.5
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	61.1	26.4	0.0	0.0	0.0	0.0	

COPY

Wind Speed & Wind Direction

Request No. LA67-R11193

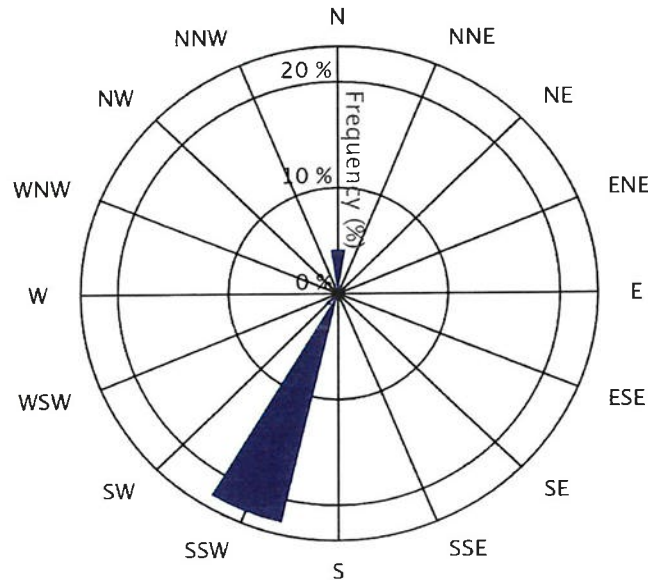
Siam Poongsan Metal Co., Ltd.

Sample No. 47359

Sampling Source : บริเวณใกล้ทางเข้าออกภายในโรงงานหลอมทองเหลือง

Sampling Date : November 14-17, 2024

Calm 72.2 %


 0.4-1.9
 2.0-3.9
 4.0-5.9
 6.0-7.9
 8.0-9.9
 > 9.9 (m/s)

WD/WS	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.4-1.9 m/s	2.0-3.9 m/s	4.0-5.9 m/s	6.0-7.9 m/s	8.0-9.9 m/s	> 9.9 m/s	
N	4.2	0.0	0.0	0.0	0.0	0.0	4.2
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	22.2	0.0	0.0	0.0	0.0	0.0	22.2
SW	1.4	0.0	0.0	0.0	0.0	0.0	1.4
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	27.8	0.0	0.0	0.0	0.0	0.0	

COPY

Wind Speed & Wind Direction

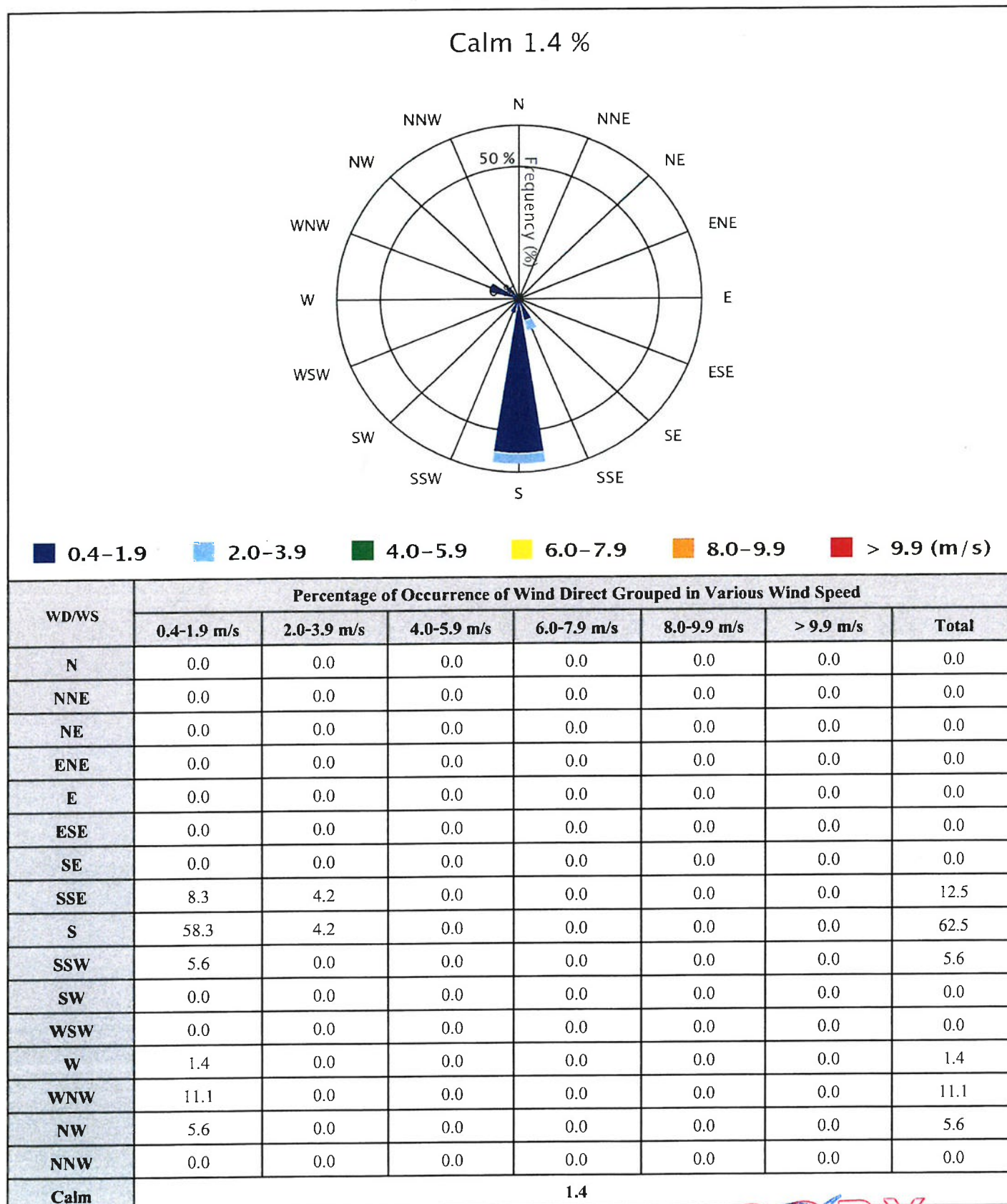
Request No. LA67-R0795

Siam Poongsan Metal Co., Ltd.

Sample No. 25337

Sampling Source : บริเวณเขตรุกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง ห่างประมาณ 0.5 กม.

Sampling Date : July 23-26, 2024



COPY

Wind Speed & Wind Direction

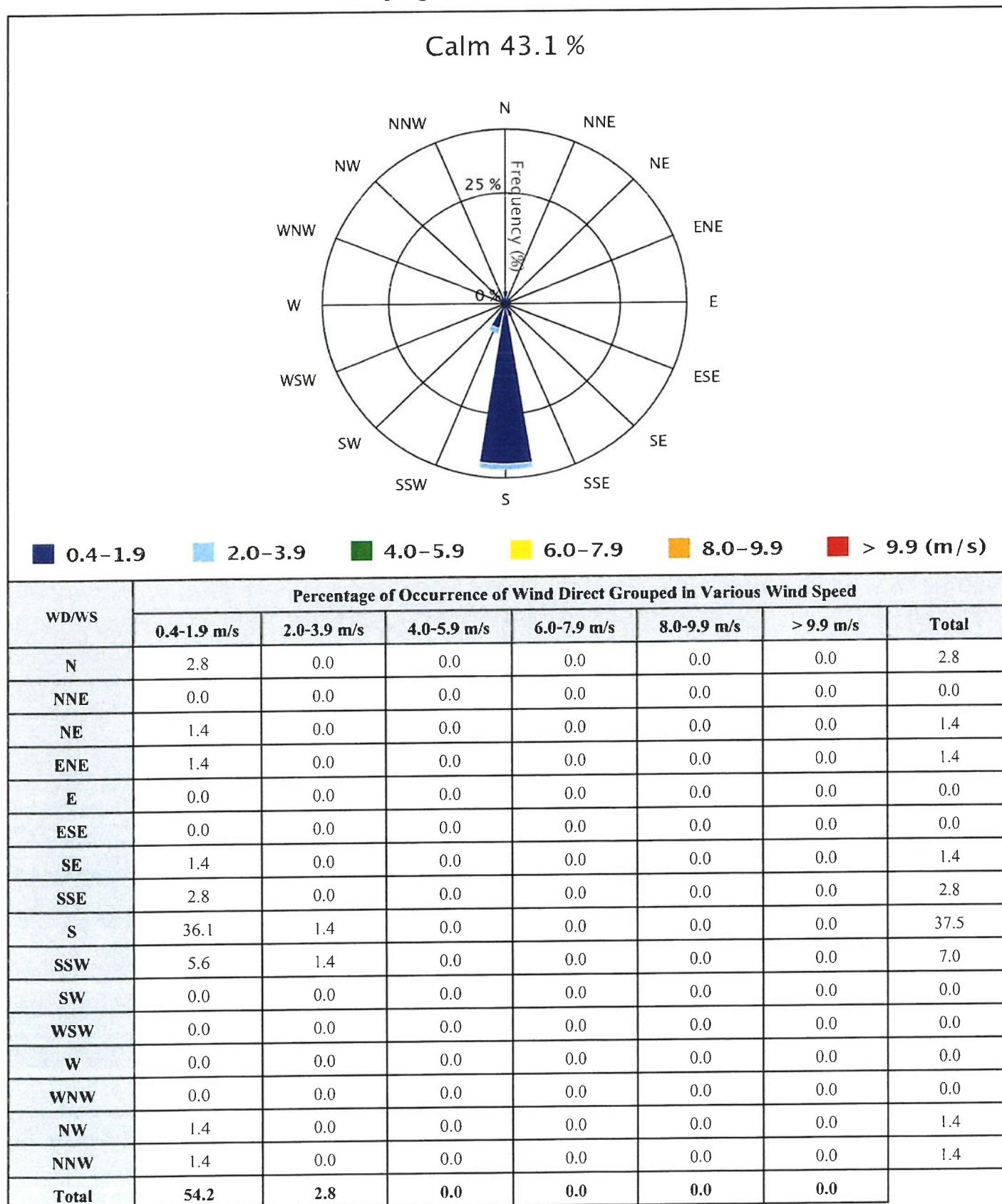
Request No. LA67-R0938

Siam Poongsan Metal Co., Ltd.

Sample No. 32815

Sampling Source : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง ห่างประมาณ 0.5 กม.

Sampling Date : September 9-12, 2024



Wind Speed & Wind Direction

Request No. LA67-R11193

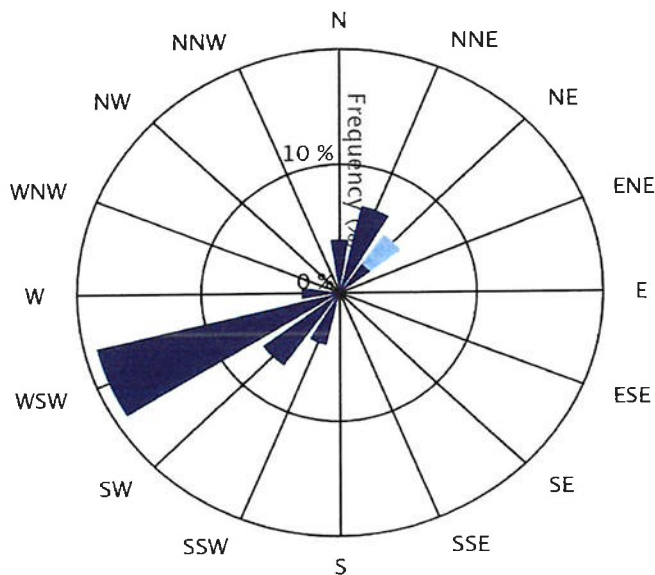
Siam Poongsan Metal Co., Ltd.

Sample No. 47358

Sampling Source : บริเวณเขตธุรกิจการค้าของนิคมอุตสาหกรรมแหลมฉบัง ห่างประมาณ 0.5 กม.

Sampling Date : November 14-17, 2024

Calm 51.4 %


 0.4-1.9
 2.0-3.9
 4.0-5.9
 6.0-7.9
 8.0-9.9
 > 9.9 (m/s)

WD/WS	Percentage of Occurrence of Wind Direct Grouped in Various Wind Speed						Total
	0.4-1.9 m/s	2.0-3.9 m/s	4.0-5.9 m/s	6.0-7.9 m/s	8.0-9.9 m/s	> 9.9 m/s	
N	4.2	0.0	0.0	0.0	0.0	0.0	4.2
NNE	6.9	0.0	0.0	0.0	0.0	0.0	6.9
NE	2.8	2.8	0.0	0.0	0.0	0.0	5.6
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	4.2	0.0	0.0	0.0	0.0	0.0	4.2
SW	6.9	0.0	0.0	0.0	0.0	0.0	6.9
WSW	18.1	0.0	0.0	0.0	0.0	0.0	18.1
W	2.8	0.0	0.0	0.0	0.0	0.0	2.8
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	45.8	2.8	0.0	0.0	0.0	0.0	

COPY

Request No. LA67-0738

Report No. 6708-0002

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Inlet Dust Collector of Melting Casting Stack SAMPLE NO. : 02847
SAMPLING DATE : 25/07/2024 SAMPLING TIME : 08:45-09:20
RECEIVED DATE : 31/07/2024 REPORTED DATE : 02/08/2024
TESTED DATE : 31/07/2024-01/08/2024
STACK DESCRIPTION @

Height :	-	m	Type of Process :	Exhaust
Diameter :	0.84	m	Type of Fuel :	-
Temperature :	47.00	°C	Oxygen Content :	20.90 %
Air Velocity :	23.29	m/s	Barometric Pressure :	751.75 mmHg
Flow rate ¹ :	11.28	m ³ /s	Atmospheric Temperature :	33.00 °C
Moisture Content :	3.61	%		

PARAMETER	TEST METHOD	TIME	RESULT ¹	UNIT
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	08:45-09:20	543.4	mg/m ³

REMARK:

- ¹ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Metee Sukprasert (จ-003-ค-0035)
- ² These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

02/08/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(จ-003-ค-0012)

02/08/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Request No. LA67-0913

Report No. 6709-0159

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : Inlet Dust Collector of Melting Casting Stack

SAMPLE NO. : 03278

SAMPLING DATE : 09/09/2024

SAMPLING TIME : 10:40-11:10

RECEIVED DATE : 11/09/2024

REPORTED DATE : 18/09/2024

TESTED DATE : 11-12/09/2024

STACK DESCRIPTION @

Height : - m
Diameter : 0.84 m
Temperature : 50.00 °C
Air Velocity : 20.89 m/s
Flow rate¹ : 10.14 m³/s
Moisture Content : 2.91 %

Type of Process : Exhaust
Type of Fuel : -
Oxygen Content : 20.90 %
Barometric Pressure : 754.75 mmHg
Atmospheric Temperature : 35.00 °C

PARAMETER	TEST METHOD	TIME	RESULT ¹	UNIT
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	10:40-11:10	76.8	mg/m ³

REMARK:

- ¹ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Metee Sukprasert (จ-003-ค-0035)
- ² These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

18/09/2024



Approved By.....

(Mr. Thongchai Boonsak)

(จ-003-ค-0012)

18/09/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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COPY

Request No. LA67-1141

Report No. 6711-0448

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Inlet Dust Collector of Melting Casting Stack SAMPLE NO. : 05052
SAMPLING DATE : 14/11/2024 SAMPLING TIME : 12:05-12:45
RECEIVED DATE : 19/11/2024 REPORTED DATE : 25/11/2024
TESTED DATE : 19-21/11/2024
STACK DESCRIPTION @

Height :	-	m	Type of Process :	Exhaust
Diameter :	0.84	m	Type of Fuel :	-
Temperature :	48.00	°C	Oxygen Content :	20.90 %
Air Velocity :	19.87	m/s	Barometric Pressure :	755.50 mmHg
Flow rate ¹ :	9.62	m ³ /s	Atmospheric Temperature :	35.00 °C
Moisture Content :	3.22	%		

PARAMETER	TEST METHOD	TIME	RESULT ¹	UNIT
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	12:05-12:45	35.4	mg/m ³

REMARK:

- ¹ Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Audomsub Jenjobjing (จ-003-จ-0009)
- ² These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

25/11/2024



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Approved By.....

(Mr. Thongchai Boonsak)

(จ-003-ค-0012)

25/11/2024

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COPY

Request No. LA67-0731

Report No. 6708-0001

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Outlet Dust Collector of Melting Casting Stack SAMPLE NO. : 02723
SAMPLING DATE : 25/07/2024 SAMPLING TIME : 08:45-09:15
RECEIVED DATE : 30/07/2024 REPORTED DATE : 02/08/2024
TESTED DATE : 30/07/2024-01/08/2024
STACK DESCRIPTION @

Height :	13.00	m	Type of Process :	Exhaust
Diameter :	0.93	m	Type of Fuel :	-
Temperature :	45.00	°C	Oxygen Content :	20.90 %
Air Velocity :	19.95	m/s	Barometric Pressure :	751.75 mmHg
Flow rate ² :	12.13	m ³ /s	Atmospheric Temperature :	31.00 °C
Moisture Content :	3.31	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	08:45-09:15	5.6	400	mg/m ³

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Warakorn Vitayaseewee (ว-003-ค-0021)
- @ These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

02/08/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(Mr. Thongchai Boonsak)

(ว-003-ค-0012)

02/08/2024

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Request No. LA67-0912

Report No. 6709-0173

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : Outlet Dust Collector of Melting Casting Stack

SAMPLE NO. : 03263

SAMPLING DATE : 09/09/2024

SAMPLING TIME : 10:40-11:15

RECEIVED DATE : 11/09/2024

REPORTED DATE : 21/09/2024

TESTED DATE : 11-12/09/2024

STACK DESCRIPTION @

Height :	13.00	m	Type of Process :	Exhaust
Diameter :	0.93	m	Type of Fuel :	-
Temperature :	51.00	°C	Oxygen Content :	20.90 %
Air Velocity :	25.52	m/s	Barometric Pressure :	754.75 mmHg
Flow rate ² :	15.31	m ³ /s	Atmospheric Temperature :	35.00 °C
Moisture Content :	3.18	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Total Suspended Particulate (TSP)	Isokinetic, Gravimetric (U.S. EPA Method 5)	10:40-11:15	0.8	400	mg/m ³

REMARK:

- ¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- ² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
- Sampling By Mr. Warakorn Vitayasewee (ว-003-ก-0021)
- ⁴ These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....



(Miss Apiradee Chuen-arom)

(ว-003-ก-0007)

21/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....



(Mr. Thongchai Boonsak)

(ว-003-ก-0012)

21/09/2024

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Request No. LA67-1154

Report No. 6711-0594

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : Outlet Dust Collector of Melting Casting Stack SAMPLE NO. : 05169

SAMPLING DATE : 14/11/2024 SAMPLING TIME : 12:05-12:40

RECEIVED DATE : 25/11/2024 REPORTED DATE : 28/11/2024

TESTED DATE : 25/11/2024

STACK DESCRIPTION @

Height :	13.00	m	Type of Process :	Exhaust
Diameter :	0.93	m	Type of Fuel :	-
Temperature :	54.00	°C	Oxygen Content :	20.90 %
Air Velocity :	24.03	m/s	Barometric Pressure :	755.50 mmHg
Flow rate ² :	14.32	m ³ /s	Atmospheric Temperature :	35.00 °C
Moisture Content :	3.07	%		

PARAMETER	TEST METHOD	TIME	RESULT ²	STD ¹	UNIT
Total Suspended Particulate	Isokinetic, Gravimetric	12:05-12:40	0.7	400	mg/m ³
(TSP)	(U.S. EPA Method 5)				

REMARK:

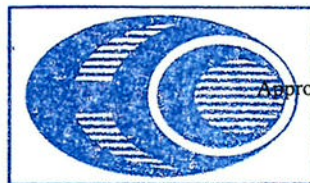
- 1.¹ Notification of The Ministry of Industry B.E. 2549 (2006)
- 2.² Standard Condition (Temperature 25°C, Pressure 760 mmHg) and Dry Basis
3. Sampling By Mr. Metee Sukprasert (จ-003-ค-0035)
- 4.[@] These Data Outside The Scope of The Registration of The Department of Industrial Works.

Examined By.....

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

28/11/2024



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Approved By.....

(Mr. Thongchai Boonsak)

(จ-003-ค-0012)

28/11/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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Test Report

Request No : W6707265

Report No : 6707-1180

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67070817

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 09/07/2024

Sampling By : ETC

Sampling Time : 11:30 AM

Sampling Method : Grab

Received Date : 10/07/2024

Tested Date : 10/07/2024 - 17/07/2024

Reported Date : 18/07/2024

Parameter	Unit	Method	Result
Biochemical Oxygen Demand	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	< 2.0
Chemical Oxygen Demand	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	44
Copper	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	130
Nickel	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.20
Oil and Grease	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0
pH (on site)		Electrometric Method	3.0

Physical Apperance : 1. Sample : ycllowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

2. Sampling By Mr. Metee Sukprasert (จ-003-ค-0035)

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

18/07/2024



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ค-0005)

18/07/2024

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Test Report

Request No : W6707265

Report No : 6707-1180

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67070817

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 09/07/2024

Sampling By : ETC

Sampling Time : 11:30 AM

Sampling Method : Grab

Received Date : 10/07/2024

Tested Date : 10/07/2024 - 17/07/2024

Reported Date : 18/07/2024

Parameter	Unit	Method	Result
Temperature	°C	Laboratory and Field Method (SM:2550 B)	35
Total Suspended Solids	mg/L	Dried at 103-105 degree celsius (SM:2540D)	6
Zinc	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	71.1

Physical Apperance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

2. Sampling By Mr. Metee Sukprasert (ว-003-ท-0035)

Examined By :

(Miss Apiradee Chuen-arom)

(ว-003-ท-0007)

18/07/2024



บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(ว-003-ท-0005)

18/07/2024

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Test Report

Request No : W6708283

Report No : 6708-1152

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla , A. Sriracha , Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67080843

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 08/08/2024

Sampling By : ETC

Sampling Time : 10:45 AM

Sampling Method : Grab

Received Date : 09/08/2024

Tested Date : 09/08/2024 - 19/08/2024

Reported Date : 20/08/2024

Parameter	Unit	Method	Result
Biochemical Oxygen Demand	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	< 2.0
Chemical Oxygen Demand	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	85
Copper	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	110
Nickel	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.17
Oil and Grease	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	5.9
Temperature	°C	Laboratory and Field Method (SM:2550 B)	31

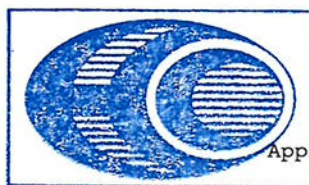
Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

2. Sampling By Mr. Songpon Phiwan (ว-003-ค-0016)

Examined By :

(Miss Apiradee Chuen-arom)
(ว-003-ค-0007)
20/08/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(ว-003-ค-0005)
20/08/2024REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

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Test Report

Request No : W6708283

Report No : 6708-1152

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67080843

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 08/08/2024

Sampling By : ETC

Sampling Time : 10:45 AM

Sampling Method : Grab

Received Date : 09/08/2024

Tested Date : 09/08/2024 - 19/08/2024

Reported Date : 20/08/2024

Parameter	Unit	Method	Result
Total Suspended Solids	mg/L	Dried at 103-105 degree celsius (SM:2540D)	<5
Zinc	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	47.2

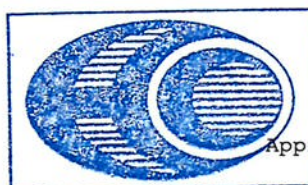
Physical Appearance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

2. Sampling By Mr. Songpon Phiwan (ว-003-ค-0016)

Examined By :

(Miss Apiradee Chuen-arom)
(ว-003-ค-0007)
20/08/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(ว-003-ค-0005)
20/08/2024REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY



Test Report

Request No : W6708283

Report No : 6708-1152

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67080843

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 08/08/2024

Sampling By : ETC

Sampling Time : 10:45 AM

Sampling Method : Grab

Received Date : 09/08/2024

Tested Date : 09/08/2024 - 19/08/2024

Reported Date : 20/08/2024

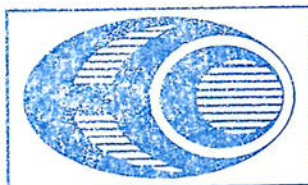
Parameter	Unit	Method	Result
pH (on site)		Electrometric Method	2.0

Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. Parameter Outside The Scope of The Registration of Department of Industrial Works

2. Sampling By Mr. Songpon Phiwuan



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Examined By :

(Miss Apiradee Chuen-arom)

20/08/2024

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

COPY

Test Report

Request No : W6709376

Report No : 6709-1679

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla , A. Sriracha , Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67091343

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 13/09/2024

Sampling By : ETC

Sampling Time : 8:45 AM

Sampling Method : Grab

Received Date : 14/09/2024

Tested Date : 16/09/2024 - 21/09/2024

Reported Date : 26/09/2024

Parameter	Unit	Method	Result
Biochemical Oxygen Demand	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	4.1
Chemical Oxygen Demand	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	96
Copper	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	90.1
Nickel	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.88
Oil and Grease	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0
Temperature	°C	Laboratory and Field Method (SM:2550 B)	34

Physical Apperance : 1. Sample : sky-blue, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

2. Sampling By Mr. Supharek Phatklang (จ-003-ก-0031)

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ก-0007)

26/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ก-0005)

26/09/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Test Report

Request No : W6709376

Report No : 6709-1679

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67091343

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 13/09/2024

Sampling By : ETC

Sampling Time : 8:45 AM

Sampling Method : Grab

Received Date : 14/09/2024

Tested Date : 16/09/2024 - 21/09/2024

Reported Date : 26/09/2024

Parameter	Unit	Method	Result
Total Suspended Solids	mg/L	Dried at 103-105 degrec celsius (SM:2540D)	< 5
Zinc	mg/L	Digestion,Inductively Coupled Plasma Method (SM:3030F, 3120B)	43.6

Physical Apperance : 1. Sample : sky-blue , lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

2. Sampling By Mr. Supharerk Phatklang (จ-003-ท-0031)

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ท-0007)

26/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ท-0005)

26/09/2024

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Test Report

Request No : W6709376

Report No : 6709-1679

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67091343

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 13/09/2024

Sampling By : ETC

Sampling Time : 8:45 AM

Sampling Method : Grab

Received Date : 14/09/2024

Tested Date : 16/09/2024 - 21/09/2024

Reported Date : 26/09/2024

Parameter	Unit	Method	Result
pH (on site)		Electrometric Method	1.5

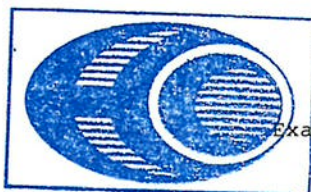
Physical Apperance : 1. Sample : sky-blue, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

2. Parameter Outside The Scope of The Registration of Department of Industrial Works

3. Sampling By Mr. Supharerk Phatklang



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Examined By :

(Miss Apiradee Chuen-arom)

26/09/2024

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Test Report

Request No : W6710266

Report No : 6710-1445

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukia, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67100868

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 08/10/2024

Sampling By : ETC

Sampling Time : 11:00 AM

Sampling Method : Grab

Received Date : 09/10/2024

Tested Date : 09/10/2024 - 22/10/2024

Reported Date : 25/10/2024

Parameter	Unit	Method	Result
Biochemical Oxygen Demand	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	10.4
Chemical Oxygen Demand	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	88
Copper	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	82.3
Nickel	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.37
Oil and Grease	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0
Temperature	°C	Laboratory and Field Method (SM:2550 B)	35

Physical Apperance : 1. Sample : slightly-gray, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

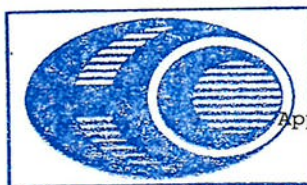
2. Sampling By Mr. Parkpoom Buasawad (ว-003-ท-0017)

Examined By :

(Miss Apiradee Chuen-arom)

(ว-003-ท-0007)

25/10/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(ว-003-ท-0005)

25/10/2024

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Test Report

Request No : W6710266

Report No : 6710-1445

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67100868

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 08/10/2024

Sampling By : ETC

Sampling Time : 11:00 AM

Sampling Method : Grab

Received Date : 09/10/2024

Tested Date : 09/10/2024 - 22/10/2024

Reported Date : 25/10/2024

Parameter	Unit	Method	Result
Total Suspended Solids	mg/L	Dried at 103-105 degree celsius (SM:2540D)	40
Zinc	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	31.2

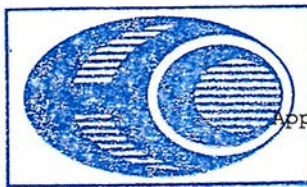
Physical Apperance : 1. Sample : slightly-gray , lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

2. Sampling By Mr. Parkpoom Buasawad (จ-003-ท-0017)

Examined By :

(Miss Apiradee Chuen-arom)
(จ-003-ท-0007)
25/10/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(จ-003-ท-0005)
25/10/2024REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Test Report

Request No : W6710266

Report No : 6710-1445

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67100868

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 08/10/2024

Sampling By : ETC

Sampling Time : 11:00 AM

Sampling Method : Grab

Received Date : 09/10/2024

Tested Date : 09/10/2024 - 22/10/2024

Reported Date : 25/10/2024

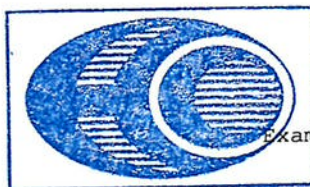
Parameter	Unit	Method	Result
pH (on site)		Electrometric Method	2.3

Physical Apperance : 1. Sample : slightly-gray , lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. Parameter Outside The Scope of The Registration of Department of Industrial Works

2. Sampling By Mr. Parkpoom Buasawad



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Examined By :

(Miss Apiradee Chuen-arom)

25/10/2024

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Test Report

Request No : W6711350

Report No : 6711-1417

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67111066

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 12/11/2024

Sampling By : ETC

Sampling Time : 10:20 AM

Sampling Method : Grab

Received Date : 13/11/2024

Tested Date : 13/11/2024 - 21/11/2024

Reported Date : 22/11/2024

Parameter	Unit	Method	Result
Biochemical Oxygen Demand	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	10.3
Chemical Oxygen Demand	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	112
Copper	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	102
Nickel	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.79
Oil and Grease	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0
Temperature	°C	Laboratory and Field Method (SM:2550 B)	30

Physical Apperance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

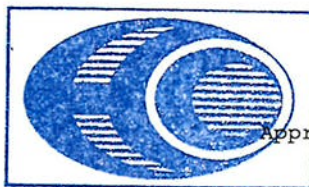
2. Sampling By Mr. Songpon Phiwuan (ว-003-ค-0016)

Examined By :

(Miss Apiradee Chuen-arom)

(ว-003-ค-0007)

22/11/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(ว-003-ค-0005)

22/11/2024

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Test Report

Request No : W6711350

Report No : 6711-1417

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67111066

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 12/11/2024

Sampling By : ETC

Sampling Time : 10:20 AM

Sampling Method : Grab

Received Date : 13/11/2024

Tested Date : 13/11/2024 - 21/11/2024

Reported Date : 22/11/2024

Parameter	Unit	Method	Result
Total Suspended Solids	mg/L	Dried at 103-105 degree celsius (SM:2540D)	6
Zinc	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	39.1

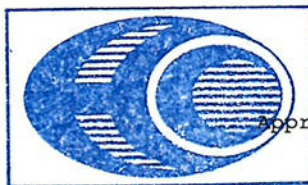
Physical Apperance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

2. Sampling By Mr. Songpon Phiwuan (จ-003-ค-0016)

Examined By :

(Miss Apiradee Chuen-arom)
(จ-003-ค-0007)
22/11/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(จ-003-ค-0005)
22/11/2024REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Page 2 of 2

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Test Report

Request No : W6711350

Report No : 6711-1417

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67111066

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 12/11/2024

Sampling By : ETC

Sampling Time : 10:20 AM

Sampling Method : Grab

Received Date : 13/11/2024

Tested Date : 13/11/2024 - 21/11/2024

Reported Date : 22/11/2024

Parameter	Unit	Method	Result
pH (on site)		Electrometric Method	1.2

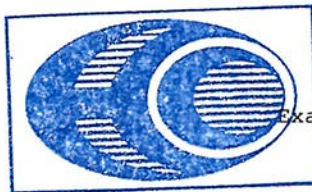
Physical Apperance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

2. Parameter Outside The Scope of The Registration of Department of Industrial Works

3. Sampling By Mr. Songpon Phiwuan



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Examined By : 

(Miss Apiradee Chuen-arom)

22/11/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Test Report

Request No : W6712382

Report No : 6712-1326

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67121180

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 13/12/2024

Sampling By : ETC

Sampling Time : 9:17 AM

Sampling Method : Grab

Received Date : 14/12/2024

Tested Date : 14/12/2024 - 19/12/2024

Reported Date : 21/12/2024

Parameter	Unit	Method	Result
Biochemical Oxygen Demand	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	< 2.0
Chemical Oxygen Demand	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	166
Copper	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	69.7
Nickel	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.40
Oil and Grease	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	39.5
Temperature	°C	Laboratory and Field Method (SM:2550 B)	39

Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.8 L, PE 2.0 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

2. Sampling By Miss Pornpinan Viriyakusolkul (จ-003-ค-0036)

Examined By :

(Miss Apiradee Chuen-arom)
(จ-003-ค-0007)
21/12/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(จ-003-ค-0005)
21/12/2024REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Test Report

Request No : W6712382

Report No : 6712-1326

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67121180

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 13/12/2024

Sampling By : ETC

Sampling Time : 9:17 AM

Sampling Method : Grab

Received Date : 14/12/2024

Tested Date : 14/12/2024 - 19/12/2024

Reported Date : 21/12/2024

Parameter	Unit	Method	Result
Total Suspended Solids-	mg/L	Dried at 103-105 degree celsius (SM:2540D)	15
Zinc	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	39.8

Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.8 L, PE 2.0 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

2. Sampling By Miss Pornpinan Viriyakusolkul (ว-003-ค-0036)

Examined By :

(Miss Apiradee Chuen-arom)
(ว-003-ค-0007)
21/12/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(ว-003-ค-0005)
21/12/2024REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Test Report

Request No : W6712382

Report No : 6712-1326

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67121180

Sample Name : น้ำก่อนเข้าระบบบำบัด (Influent)

Sampling Date : 13/12/2024

Sampling By : ETC

Sampling Time : 9:17 AM

Sampling Method : Grab

Received Date : 14/12/2024

Tested Date : 14/12/2024 - 19/12/2024

Reported Date : 21/12/2024

Parameter	Unit	Method	Result
pH (on site)		Electrometric Method	2.0

Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.8 L, PE 2.0 L, G 1.0 L]

Remark : 1. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

2. Parameter Outside The Scope of The Registration of Department of Industrial Works

3. Sampling By Miss Pornpinan Viriyakusolkul



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Examined By :

(Miss Apiradee Chuen-arom)

21/12/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Test Report

Request No : W6707265, W6707485

Report No : 6707-1181-1, 6707-1643

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67070818, W67071521

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent)

Sampling Date : 09/07/2024, 19/07/2024

Sampling By : ETC

Sampling Time : 11:35 AM, 10:15 AM

Sampling Method : Grab

Received Date : 10/07/2024, 20/07/2024

Tested Date : 10/07/2024 - 17/07/2024

Reported Date : 24/07/2024

Parameter	Unit	Method	Result	Standard/ ¹
Biochemical Oxygen Demand	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	< 2.0	≤500
Chemical Oxygen Demand	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	< 40	≤750
Copper/2	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.53	≤2
Nickel	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site)		Electrometric Method	6.7	5.5-9.0

Physical Apperance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. /2 Sample No. W67071521 : Sampling Date 19/07/2024 (10:15 AM) : Tested Date 20/07/2024 – 24/07/2024

4. Sampling By Mr. Metee Sukprasert (จ-003-ท-0035)

Examined By :

(Miss Apiradee Chuen-arom)
(จ-003-ท-0007)
24/07/2024

SUPPLEMENT TO TEST REPORT NO. 6707-1181



บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(จ-003-ท-0005)
24/07/2024REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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COPY

Test Report

Request No : W6707265, W6707485

Report No : 6707-1181-1, 6707-1643

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67070818, W67071521

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent)

Sampling Date : 09/07/2024, 19/07/2024

Sampling By : ETC

Sampling Time : 11:35 AM, 10:15 AM

Sampling Method : Grab

Received Date : 10/07/2024, 20/07/2024

Tested Date : 10/07/2024 - 17/07/2024

Reported Date : 24/07/2024

Parameter	Unit	Method	Result	Standard ¹
Temperature	°C	Laboratory and Field Method (SM:2550 B)	32	≤45
Total Suspended Solids	mg/L	Dried at 103-105 degree celsius (SM:2540D)	< 5	≤200
Zinc	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.73	≤5

Physical Apperance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. /2 Sample No. W67071521 : Sampling Date 19/07/2024 (10:15 AM) : Tested Date 20/07/2024 – 24/07/2024

4. Sampling By Mr. Metee Sukprasert (จ-003-ค-0035)

Examined By :

(Miss Apiradee Chuen-arom)
(จ-003-ค-0007)
24/07/2024

SUPPLEMENT TO TEST REPORT NO. 6707-1181



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(จ-003-ค-0005)
24/07/2024REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Test Report

Request No : W6708283

Report No : 6708-1153

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67080844

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent)

Sampling Date : 08/08/2024

Sampling By : ETC

Sampling Time : 10:55 AM

Sampling Method : Grab

Received Date : 09/08/2024

Tested Date : 09/08/2024 - 19/08/2024

Reported Date : 20/08/2024

Parameter	Unit	Method	Result	Standard ¹
Biochemical Oxygen Demand	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	9.2	≤500
Chemical Oxygen Demand	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	< 40	≤750
Copper	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	1.35	≤2
Nickel	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site)		Electrometric Method	7.2	5.5-9.0

Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

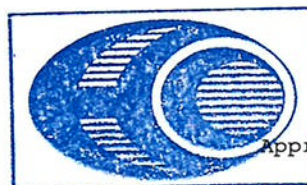
3. Sampling By Mr. Songpon Phiwan (1-003-ค-0016)

Examined By :

(Miss Apiradee Chuen-arom)

(1-003-ค-0007)

20/08/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(1-003-ค-0005)

20/08/2024

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Test Report

Request No : W6708283

Report No : 6708-1153

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67080844

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent)

Sampling Date : 08/08/2024

Sampling By : ETC

Sampling Time : 10:55 AM

Sampling Method : Grab

Received Date : 09/08/2024

Tested Date : 09/08/2024 - 19/08/2024

Reported Date : 20/08/2024

Parameter	Unit	Method	Result	Standard ¹
Temperature	°C	Laboratory and Field Method (SM:2550 B)	30	≤45
Total Suspended Solids	mg/L	Dried at 103-105 degree celsius (SM:2540D)	< 5	≤200
Zinc	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.51	≤5

Physical Apperance : 1. Sample : lightly SS

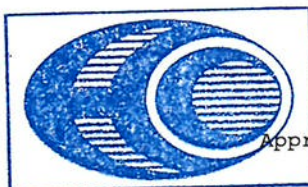
2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. Sampling By Mr. Songpon Phiwan (ว-003-ค-0016)

Examined By :

(Miss Apiradee Chuen-arom)
(ว-003-ค-0007)
20/08/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(ว-003-ค-0005)
20/08/2024REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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COPY

Test Report

Request No : W6709376

Report No : 6709-1680

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67091344

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent)

Sampling Date : 13/09/2024

Sampling By : ETC

Sampling Time : 8:55 AM

Sampling Method : Grab

Received Date : 14/09/2024

Tested Date : 16/09/2024 - 21/09/2024

Reported Date : 26/09/2024

Parameter	Unit	Method	Result	Standard ¹
Biochemical Oxygen Demand	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	3.1	≤500
Chemical Oxygen Demand	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	76	≤750
Copper	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	1.25	≤2
Nickel	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site)		Electrometric Method	6.2	5.5-9.0

Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. Sampling By Mr. Supharerk Phatklang (ว-003-ท-0031)

Examined By :

(Miss Apiradee Chuen-arom)

(ว-003-ท-0007)

26/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(ว-003-ท-0005)

26/09/2024

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Test Report

Request No : W6709376

Report No : 6709-1680

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla , A. Sriracha , Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67091344

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent)

Sampling Date : 13/09/2024

Sampling By : ETC

Sampling Time : 8:55 AM

Sampling Method : Grab

Received Date : 14/09/2024

Tested Date : 16/09/2024 - 21/09/2024

Reported Date : 26/09/2024

Parameter	Unit	Method	Result	Standard ¹
Temperature	°C	Laboratory and Field Method (SM:2550 B)	32	≤45
Total Suspended Solids	mg/L	Dried at 103-105 degree celsius (SM:2540D)	12	≤200
Zinc	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.54	≤5

Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. Sampling By Mr. Supharerk Phatklang (จ-003-ค-0031)

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

26/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ค-0005)

26/09/2024

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Test Report

Request No : W6710266

Report No : 6710-1446

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67100869

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent)

Sampling Date : 08/10/2024

Sampling By : ETC

Sampling Time : 11:15 AM

Sampling Method : Grab

Received Date : 09/10/2024

Tested Date : 09/10/2024 - 22/10/2024

Reported Date : 25/10/2024

Parameter	Unit	Method	Result	Standard ¹
Biochemical Oxygen Demand	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	9.2	≤500
Chemical Oxygen Demand	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	50	≤750
Copper	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.52	≤2
Nickel	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site)		Electrometric Method	6.8	5.5-9.0

Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /I Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

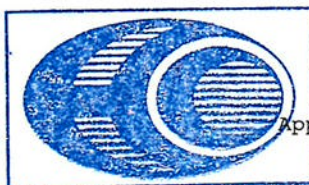
3. Sampling By Mr. Parkpoom Buasawad (จ-003-ค-0017)

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

25/10/2024



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ค-0005)

25/10/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Test Report

Request No : W6710266

Report No : 6710-1446

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67100869

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent)

Sampling Date : 08/10/2024

Sampling By : ETC

Sampling Time : 11:15 AM

Sampling Method : Grab

Received Date : 09/10/2024

Tested Date : 09/10/2024 - 22/10/2024

Reported Date : 25/10/2024

Parameter	Unit	Method	Result	Standard ¹
Temperature	°C	Laboratory and Field Method (SM:2550 B)	33	≤45
Total Suspended Solids	mg/L	Dried at 103-105 degree celsius (SM:2540D)	< 5	≤200
Zinc	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.33	≤5

Physical Apperance : 1. Sample : lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

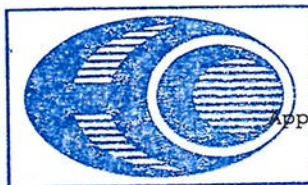
3. Sampling By Mr. Parkpoom Buasawad (จ-003-ค-0017)

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ค-0007)

25/10/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ค-0005)

25/10/2024

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Test Report

Request No : W6711350

Report No : 6711-1418

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67111067

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent)

Sampling Date : 12/11/2024

Sampling By : ETC

Sampling Time : 10:25 AM

Sampling Method : Grab

Received Date : 13/11/2024

Tested Date : 13/11/2024 - 21/11/2024

Reported Date : 22/11/2024

Parameter	Unit	Method	Result	Standard/ ¹
Biochemical Oxygen Demand	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	4.5	≤500
Chemical Oxygen Demand	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	45	≤750
Copper	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.73	≤2
Nickel	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site)		Electrometric Method	6.1	5.5-9.0

Physical Appearance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. Sampling By Mr. Songpon Phiwan (จ-003-ค-0016)

Examined By :

(Miss Apiradee Chuen-arom)
(จ-003-ค-0007)
22/11/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)
(จ-003-ค-0005)
22/11/2024REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Test Report

Request No : W6711350

Report No : 6711-1418

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67111067

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent)

Sampling Date : 12/11/2024

Sampling By : ETC

Sampling Time : 10:25 AM

Sampling Method : Grab

Received Date : 13/11/2024

Tested Date : 13/11/2024 - 21/11/2024

Reported Date : 22/11/2024

Parameter	Unit	Method	Result	Standard/ ¹
Temperature	°C	Laboratory and Field Method (SM:2550 B)	35	≤45
Total Suspended Solids	mg/L	Dried at 103-105 degree celsius (SM:2540D)	<5	≤200
Zinc	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.47	≤5

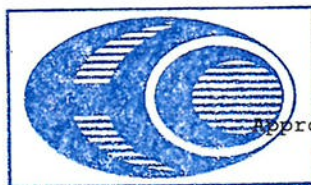
Physical Apperance : 1. Sample : yellowish, lightly SS

2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.0 L, PE 1.8 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. Sampling By Mr. Songpon Phiwan (จ-003-ค-0016)

Examined By : (Miss Apiradee Chuen-arom)
(จ-003-ค-0007)
22/11/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By : (Miss Nunnaphat Bakhuntod)
(จ-003-ค-0005)
22/11/2024REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Test Report

Request No : W6712382

Report No : 6712-1327

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67121181

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent)

Sampling Date : 13/12/2024

Sampling By : ETC

Sampling Time : 9:04 AM

Sampling Method : Grab

Received Date : 14/12/2024

Tested Date : 14/12/2024 - 19/12/2024

Reported Date : 21/12/2024

Parameter	Unit	Method	Result	Standard ¹
Biochemical Oxygen Demand	mg/L	5-Day BOD Test, Membrane Electrode Method (SM:5210B)	10.4	≤500
Chemical Oxygen Demand	mg/L	Closed Reflux, Titrimetric Method (SM:5220C)	41	≤750
Copper	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.84	≤2
Nickel	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	< 0.03	≤1
Oil and Grease	mg/L	Liquid-Liquid, Partition-Gravimetric Method (SM:5520B)	< 3.0	≤10
pH (on site)		Electrometric Method	7.0	5.5-9.0

Physical Apperance : 1. Sample : yellowish, lightly SS
2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.8 L, PE 2.0 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)
2. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.
3. Sampling By Miss Pornpinan Viriyakusolkul (ว-003-ท-0036)

Examined By :

(Miss Apiradee Chuen-arom)

(ว-003-ท-0007)

21/12/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(ว-003-ท-0005)

21/12/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Test Report

Request No : W6712382

Report No : 6712-1327

Customer : Siam Poongsan Metal Co.,Ltd.

Address : 38/14 Laemchabang Industrial Estate, Moo 5 T. Tungsukla, A. Sriracha, Chonburi 20230

Sampling Source : Siam Poongsan Metal Co.,Ltd.

Sample No : W 67121181

Sample Name : น้ำหลังผ่านระบบบำบัด (Effluent)

Sampling Date : 13/12/2024

Sampling By : ETC

Sampling Time : 9:04 AM

Sampling Method : Grab

Received Date : 14/12/2024

Tested Date : 14/12/2024 - 19/12/2024

Reported Date : 21/12/2024

Parameter	Unit	Method	Result	Standard ¹
Temperature	°C	Laboratory and Field Method (SM:2550 B)	30	≤45
Total Suspended Solids	mg/L	Dried at 103-105 degree celsius (SM:2540D)	15	≤200
Zinc	mg/L	Digestion, Inductively Coupled Plasma Method (SM:3030F, 3120B)	0.62	≤5

Physical Apperance : 1. Sample : yellowish, lightly SS
2. Container : Normal [PE 0.5 L (2 Bottle), PE 1.8 L, PE 2.0 L, G 1.0 L]

Remark : 1. /1 Notification of Industrial Estate Authority of Thailand 029 / 2567 (2024)

2. SM = Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 24th Edition, 2023.

3. Sampling By Miss Pornpinan Viriyakusolkul (จ-003-ท-0036)

Examined By :

(Miss Apiradee Chuen-arom)

(จ-003-ท-0007)

21/12/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By :

(Miss Nunnaphat Bakhuntod)

(จ-003-ท-0005)

21/12/2024

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Request No. LA67-R0737

Report No. R6707-I401

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศเหนือ
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00443359 : Class 2

SAMPLE NO. : 22694
MEASURING DATE : 04-05/07/2024
RECEIVED DATE : 06/07/2024
REPORTED DATE : 11/07/2024

TIME \ DATE	04-05/07/2024 (L_{eq})	UNIT
09:25 - 10:25 ¹	70.7	dB(A)
10:25 - 11:25	68.9	dB(A)
11:25 - 12:25	66.3	dB(A)
12:25 - 13:25	69.9	dB(A)
13:25 - 14:25	71.1	dB(A)
14:25 - 15:25	69.1	dB(A)
15:25 - 16:25	68.6	dB(A)
16:25 - 17:25	68.2	dB(A)
17:25 - 18:25	68.9	dB(A)
18:25 - 19:25	68.4	dB(A)
19:25 - 20:25	66.9	dB(A)
20:25 - 21:25	66.7	dB(A)
21:25 - 22:25	66.6	dB(A)
22:25 - 23:25	66.8	dB(A)
23:25 - 00:25	66.4	dB(A)
00:25 - 01:25	69.6	dB(A)
01:25 - 02:25	67.9	dB(A)
02:25 - 03:25	66.2	dB(A)
03:25 - 04:25	66.4	dB(A)
04:25 - 05:25	67.0	dB(A)
05:25 - 06:25	66.6	dB(A)
06:25 - 07:25	68.4	dB(A)
07:25 - 08:25	69.4	dB(A)
08:25 - 09:25	69.8	dB(A)
L_{eq} 24 hr.	68.4	dB(A)
L_{dn}	74.1	dB(A)
Standard	$70^{1/1}, 70^{1/2}$	dB(A)

REMARK : ¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)² Notification of Ministry of the Industry B.E. 2548 (2005)³ Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Onanong Leewongsak)

บริษัท อีสเทิร์นไทยคอนซัลตติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

11/07/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศเหนือ
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00322754 : Class 2

SAMPLE NO. : 31208
MEASURING DATE : 29-30/08/2024
RECEIVED DATE : 30/08/2024
REPORTED DATE : 04/09/2024

TIME \ DATE	29-30/08/2024 (L_{eq})	UNIT
09:00 - 10:00 ¹	68.4	dB(A)
10:00 - 11:00	67.9	dB(A)
11:00 - 12:00	66.7	dB(A)
12:00 - 13:00	68.4	dB(A)
13:00 - 14:00	67.8	dB(A)
14:00 - 15:00	68.3	dB(A)
15:00 - 16:00	67.3	dB(A)
16:00 - 17:00	67.4	dB(A)
17:00 - 18:00	67.3	dB(A)
18:00 - 19:00	68.2	dB(A)
19:00 - 20:00	66.8	dB(A)
20:00 - 21:00	66.8	dB(A)
21:00 - 22:00	67.3	dB(A)
22:00 - 23:00	68.2	dB(A)
23:00 - 00:00	67.9	dB(A)
00:00 - 01:00	67.8	dB(A)
01:00 - 02:00	67.2	dB(A)
02:00 - 03:00	66.3	dB(A)
03:00 - 04:00	66.3	dB(A)
04:00 - 05:00	66.8	dB(A)
05:00 - 06:00	66.9	dB(A)
06:00 - 07:00	67.4	dB(A)
07:00 - 08:00	68.5	dB(A)
08:00 - 09:00	67.5	dB(A)
L_{eq} 24 hr.	67.5	dB(A)
L_{dn}	73.7	dB(A)
Standard	$70^{1/1}, 70^{2/2}$	dB(A)

REMARK : ¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)² Notification of Ministry of the Industry B.E. 2548 (2005)³ Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Onanong Leewongsak)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

04/09/2024

COPY

Request No. LA67-R0922

Report No. R6709-1225

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศเหนือ
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr. & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00322750 : Class 2

SAMPLE NO. : 32431
MEASURING DATE : 06-07/09/2024
RECEIVED DATE : 07/09/2024
REPORTED DATE : 13/09/2024

TIME \ DATE	06-07/09/2024 (L_{eq})	UNIT
10:00 - 11:00 ^{1/3}	69.7	dB(A)
11:00 - 12:00	67.4	dB(A)
12:00 - 13:00	65.3	dB(A)
13:00 - 14:00	69.5	dB(A)
14:00 - 15:00	69.5	dB(A)
15:00 - 16:00	68.6	dB(A)
16:00 - 17:00	69.4	dB(A)
17:00 - 18:00	67.2	dB(A)
18:00 - 19:00	69.9	dB(A)
19:00 - 20:00	66.4	dB(A)
20:00 - 21:00	65.2	dB(A)
21:00 - 22:00	66.6	dB(A)
22:00 - 23:00	66.2	dB(A)
23:00 - 00:00	64.6	dB(A)
00:00 - 01:00	65.4	dB(A)
01:00 - 02:00	66.1	dB(A)
02:00 - 03:00	64.8	dB(A)
03:00 - 04:00	64.6	dB(A)
04:00 - 05:00	64.7	dB(A)
05:00 - 06:00	65.4	dB(A)
06:00 - 07:00	65.0	dB(A)
07:00 - 08:00	66.4	dB(A)
08:00 - 09:00	69.2	dB(A)
09:00 - 10:00	70.1	dB(A)
L_{eq} 24 hr.	67.4	dB(A)
L_{dn}	72.3	dB(A)
Standard	$70^{1/1}, 70^{1/2}$	dB(A)

REMARK : ^{1/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{1/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{1/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Onanong Leewongsak)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

13/09/2024

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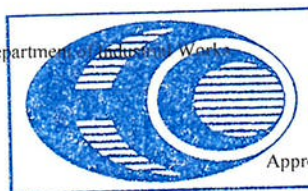
COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศเหนือ
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr. & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00322752 : Class 2

SAMPLE NO. : 40716
MEASURING DATE : 22-23/10/2024
RECEIVED DATE : 23/10/2024
REPORTED DATE : 11/11/2024

TIME \ DATE	22-23/10/2024 (L_{eq})	UNIT
11:30 - 12:30 ^{/3}	66.1	dB(A)
12:30 - 13:30	69.5	dB(A)
13:30 - 14:30	71.2	dB(A)
14:30 - 15:30	71.0	dB(A)
15:30 - 16:30	73.4	dB(A)
16:30 - 17:30	69.3	dB(A)
17:30 - 18:30	69.6	dB(A)
18:30 - 19:30	71.2	dB(A)
19:30 - 20:30	67.6	dB(A)
20:30 - 21:30	66.8	dB(A)
21:30 - 22:30	66.4	dB(A)
22:30 - 23:30	66.1	dB(A)
23:30 - 00:30	67.5	dB(A)
00:30 - 01:30	65.9	dB(A)
01:30 - 02:30	74.8	dB(A)
02:30 - 03:30	70.8	dB(A)
03:30 - 04:30	67.2	dB(A)
04:30 - 05:30	66.3	dB(A)
05:30 - 06:30	66.3	dB(A)
06:30 - 07:30	67.7	dB(A)
07:30 - 08:30	66.3	dB(A)
08:30 - 09:30	67.8	dB(A)
09:30 - 10:30	66.6	dB(A)
10:30 - 11:30	68.7	dB(A)
L_{eq} 24 hr.	69.3	dB(A)
L_{dn}	75.7	dB(A)
Standard	$70^{/1}$, $70^{/2}$	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Ms. Jutarat Suksaget)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. APIRADEE CHUEN-AROM)

11/11/2024

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Request No. LA67-R11188

Report No. R6711-6229

TEST REPORT

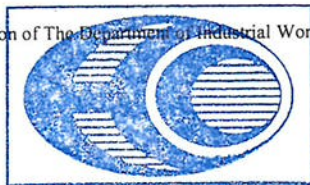
CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศเหนือ
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00322751 : Class 2

SAMPLE NO. : 47130
MEASURING DATE : 20-21/11/2024
RECEIVED DATE : 22/11/2024
REPORTED DATE : 26/11/2024

TIME \ DATE	20-21/11/2024 (L_{eq})	UNIT
09:45 - 10:45 ^{/3}	76.1	dB(A)
10:45 - 11:45	68.8	dB(A)
11:45 - 12:45	66.6	dB(A)
12:45 - 13:45	67.2	dB(A)
13:45 - 14:45	67.1	dB(A)
14:45 - 15:45	67.3	dB(A)
15:45 - 16:45	67.2	dB(A)
16:45 - 17:45	68.5	dB(A)
17:45 - 18:45	68.1	dB(A)
18:45 - 19:45	67.8	dB(A)
19:45 - 20:45	67.6	dB(A)
20:45 - 21:45	67.0	dB(A)
21:45 - 22:45	66.4	dB(A)
22:45 - 23:45	67.4	dB(A)
23:45 - 00:45	66.2	dB(A)
00:45 - 01:45	68.2	dB(A)
01:45 - 02:45	67.8	dB(A)
02:45 - 03:45	67.0	dB(A)
03:45 - 04:45	66.3	dB(A)
04:45 - 05:45	67.1	dB(A)
05:45 - 06:45	66.8	dB(A)
06:45 - 07:45	67.7	dB(A)
07:45 - 08:45	68.3	dB(A)
08:45 - 09:45	69.3	dB(A)
L_{eq} 24 hr.	68.5	dB(A)
L_{dn}	73.9	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	dB(A)

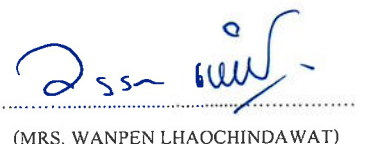
REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Savita Kittinoavarat)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....



(MRS. WANPEN LHAOCHINDAWAT)

26/11/2024

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Request No. LA67-R1262

Report No. R6712-2033

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศเหนือ
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00322753 : Class 2

SAMPLE NO. : 50320
MEASURING DATE : 06-07/12/2024
RECEIVED DATE : 09/12/2024
REPORTED DATE : 17/12/2024

TIME \ DATE	06-07/12/2024 (L_{eq})	UNIT
08:30 - 09:30 ^{/1}	73.0	dB(A)
09:30 - 10:30	73.2	dB(A)
10:30 - 11:30	68.4	dB(A)
11:30 - 12:30	67.4	dB(A)
12:30 - 13:30	72.9	dB(A)
13:30 - 14:30	72.1	dB(A)
14:30 - 15:30	70.8	dB(A)
15:30 - 16:30	70.8	dB(A)
16:30 - 17:30	67.0	dB(A)
17:30 - 18:30	66.8	dB(A)
18:30 - 19:30	66.8	dB(A)
19:30 - 20:30	67.8	dB(A)
20:30 - 21:30	67.9	dB(A)
21:30 - 22:30	67.5	dB(A)
22:30 - 23:30	66.7	dB(A)
23:30 - 00:30	66.6	dB(A)
00:30 - 01:30	67.4	dB(A)
01:30 - 02:30	66.6	dB(A)
02:30 - 03:30	67.5	dB(A)
03:30 - 04:30	66.5	dB(A)
04:30 - 05:30	67.6	dB(A)
05:30 - 06:30	67.1	dB(A)
06:30 - 07:30	67.2	dB(A)
07:30 - 08:30	66.8	dB(A)
L_{eq} 24 hr.	69.1	dB(A)
L_{dn}	74.0	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Ms. Onanong Leewongsak)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

17/12/2024

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Request No. LA67-R0737

Report No. R6707-1404

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศใต้
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 01147300 : Class 2

SAMPLE NO. : 22697
MEASURING DATE : 04-05/07/2024
RECEIVED DATE : 06/07/2024
REPORTED DATE : 11/07/2024

TIME \ DATE	04-05/07/2024 (L_{eq})	UNIT
10:15 - 11:15 ³	59.8	dB(A)
11:15 - 12:15	58.7	dB(A)
12:15 - 13:15	57.1	dB(A)
13:15 - 14:15	57.4	dB(A)
14:15 - 15:15	60.4	dB(A)
15:15 - 16:15	60.7	dB(A)
16:15 - 17:15	56.2	dB(A)
17:15 - 18:15	60.0	dB(A)
18:15 - 19:15	57.9	dB(A)
19:15 - 20:15	58.2	dB(A)
20:15 - 21:15	59.9	dB(A)
21:15 - 22:15	56.6	dB(A)
22:15 - 23:15	56.1	dB(A)
23:15 - 00:15	54.6	dB(A)
00:15 - 01:15	56.4	dB(A)
01:15 - 02:15	62.9	dB(A)
02:15 - 03:15	60.6	dB(A)
03:15 - 04:15	59.9	dB(A)
04:15 - 05:15	51.6	dB(A)
05:15 - 06:15	54.9	dB(A)
06:15 - 07:15	58.9	dB(A)
07:15 - 08:15	59.7	dB(A)
08:15 - 09:15	58.8	dB(A)
09:15 - 10:15	59.9	dB(A)
L_{eq} 24 hr.	58.8	dB(A)
L_{dn}	65.0	dB(A)
Standard	$70^{1/1}, 70^{2/2}$	dB(A)

REMARK : ^{1/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{1/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{1/3} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Onanong Leewongsak)



Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

11/07/2024

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Request No. LA67-R0821

Report No. R6708-3947

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศใต้
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00209079 : Class 2

SAMPLE NO. : 29327
MEASURING DATE : 07-08/08/2024
RECEIVED DATE : 08/08/2024
REPORTED DATE : 20/08/2024

TIME \ DATE	07-08/08/2024	UNIT
	(L_{eq})	
09:00 - 10:00 ¹	60.7	dB(A)
10:00 - 11:00	60.6	dB(A)
11:00 - 12:00	59.1	dB(A)
12:00 - 13:00	56.9	dB(A)
13:00 - 14:00	61.9	dB(A)
14:00 - 15:00	61.1	dB(A)
15:00 - 16:00	63.7	dB(A)
16:00 - 17:00	61.2	dB(A)
17:00 - 18:00	59.9	dB(A)
18:00 - 19:00	63.9	dB(A)
19:00 - 20:00	59.6	dB(A)
20:00 - 21:00	61.9	dB(A)
21:00 - 22:00	58.1	dB(A)
22:00 - 23:00	59.1	dB(A)
23:00 - 00:00	58.4	dB(A)
00:00 - 01:00	58.1	dB(A)
01:00 - 02:00	60.2	dB(A)
02:00 - 03:00	59.2	dB(A)
03:00 - 04:00	59.0	dB(A)
04:00 - 05:00	56.9	dB(A)
05:00 - 06:00	58.3	dB(A)
06:00 - 07:00	61.6	dB(A)
07:00 - 08:00	60.7	dB(A)
08:00 - 09:00	66.2	dB(A)
L_{eq} 24 hr.	60.9	dB(A)
L_{dn}	66.0	dB(A)
Standard	$70^{/1}, 70^{/2}$	dB(A)

REMARK : ¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)² Notification of Ministry of the Industry B.E. 2548 (2005)³ Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Jutarat Suksaget)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

20/08/2024

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Request No. LA67-R0922

Report No. R6709-1228

TEST REPORT

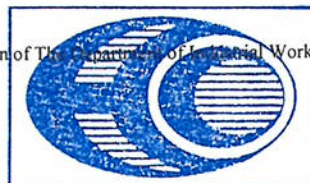
CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukia A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศใต้
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00222594 : Class 2

SAMPLE NO. : 32434
MEASURING DATE : 06-07/09/2024
RECEIVED DATE : 07/09/2024
REPORTED DATE : 13/09/2024

TIME \ DATE	06-07/09/2024 (L_{eq})	UNIT
10:00 - 11:00 ^{1/3}	67.2	dB(A)
11:00 - 12:00	59.7	dB(A)
12:00 - 13:00	57.0	dB(A)
13:00 - 14:00	60.0	dB(A)
14:00 - 15:00	59.3	dB(A)
15:00 - 16:00	61.9	dB(A)
16:00 - 17:00	59.2	dB(A)
17:00 - 18:00	60.5	dB(A)
18:00 - 19:00	62.4	dB(A)
19:00 - 20:00	59.5	dB(A)
20:00 - 21:00	67.6	dB(A)
21:00 - 22:00	68.1	dB(A)
22:00 - 23:00	56.9	dB(A)
23:00 - 00:00	54.7	dB(A)
00:00 - 01:00	55.5	dB(A)
01:00 - 02:00	56.6	dB(A)
02:00 - 03:00	56.9	dB(A)
03:00 - 04:00	57.9	dB(A)
04:00 - 05:00	52.6	dB(A)
05:00 - 06:00	57.4	dB(A)
06:00 - 07:00	58.9	dB(A)
07:00 - 08:00	62.5	dB(A)
08:00 - 09:00	66.0	dB(A)
09:00 - 10:00	65.5	dB(A)
L_{eq} 24 hr.	62.3	dB(A)
L_{dn}	65.1	dB(A)
Standard	70 ^{1/1} , 70 ^{1/2}	dB(A)

REMARK : ^{1/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{1/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{1/3} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

13/09/2024

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Request No. LA67-R1109

Report No. R6711-0131

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศใต้
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr. & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00222593 : Class 2

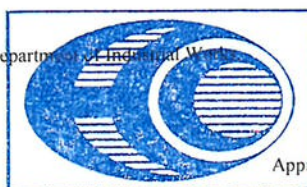
SAMPLE NO. : 40719
MEASURING DATE : 22-23/10/2024
RECEIVED DATE : 23/10/2024
REPORTED DATE : 11/11/2024

TIME \ DATE	22-23/10/2024 (L_{eq})	UNIT
11:30 - 12:30 ^{/3}	58.6	dB(A)
12:30 - 13:30	58.4	dB(A)
13:30 - 14:30	60.6	dB(A)
14:30 - 15:30	68.6	dB(A)
15:30 - 16:30	68.6	dB(A)
16:30 - 17:30	60.0	dB(A)
17:30 - 18:30	59.7	dB(A)
18:30 - 19:30	63.6	dB(A)
19:30 - 20:30	62.9	dB(A)
20:30 - 21:30	58.5	dB(A)
21:30 - 22:30	58.6	dB(A)
22:30 - 23:30	58.5	dB(A)
23:30 - 00:30	57.4	dB(A)
00:30 - 01:30	58.3	dB(A)
01:30 - 02:30	74.4	dB(A)
02:30 - 03:30	55.3	dB(A)
03:30 - 04:30	65.9	dB(A)
04:30 - 05:30	54.1	dB(A)
05:30 - 06:30	58.1	dB(A)
06:30 - 07:30	60.5	dB(A)
07:30 - 08:30	59.6	dB(A)
08:30 - 09:30	60.4	dB(A)
09:30 - 10:30	68.0	dB(A)
10:30 - 11:30	59.1	dB(A)
L_{eq} 24 hr.	64.6	dB(A)
L_{dn}	72.1	dB(A)
Standard	$70^{/1}$, $70^{/2}$	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works

(Measurement By Ms. Jutarat Suksaget)



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By.....



(MS. APIRADEE CHUEN-AROM)

11/11/2024

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TEST REPORT

CUSTOMER	: Siam Poongsan Metal Co., Ltd.	SAMPLE NO.	: 47132
ADDRESS	: 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230	MEASURING DATE	: 20-21/11/2024
SAMPLE SOURCE	: Siam Poongsan Metal Co., Ltd.	RECEIVED DATE	: 22/11/2024
SAMPLE POINT	: ริมรั้วด้านทิศใต้	REPORTED DATE	: 26/11/2024
PARAMETER*	: L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}		
DETERMINATION METHOD	: ISO 1996-1:2016		
INSTRUMENT	: Integrated Sound Level Meter		
	S/N 00322754 : Class 2		

TIME \ DATE	20-21/11/2024 (L_{eq})	UNIT
09:55 - 10:55 ¹⁾	62.4	dB(A)
10:55 - 11:55	65.9	dB(A)
11:55 - 12:55	58.4	dB(A)
12:55 - 13:55	61.2	dB(A)
13:55 - 14:55	64.5	dB(A)
14:55 - 15:55	64.4	dB(A)
15:55 - 16:55	61.8	dB(A)
16:55 - 17:55	60.4	dB(A)
17:55 - 18:55	62.7	dB(A)
18:55 - 19:55	65.6	dB(A)
19:55 - 20:55	64.4	dB(A)
20:55 - 21:55	57.6	dB(A)
21:55 - 22:55	56.3	dB(A)
22:55 - 23:55	55.6	dB(A)
23:55 - 00:55	60.0	dB(A)
00:55 - 01:55	58.1	dB(A)
01:55 - 02:55	60.0	dB(A)
02:55 - 03:55	56.4	dB(A)
03:55 - 04:55	52.6	dB(A)
04:55 - 05:55	58.7	dB(A)
05:55 - 06:55	60.3	dB(A)
06:55 - 07:55	60.7	dB(A)
07:55 - 08:55	61.5	dB(A)
08:55 - 09:55	63.0	dB(A)
L_{eq} 24 hr.	61.7	dB(A)
L_{dn}	65.4	dB(A)
Standard	$70^{1/1}, 70^{1/2}$	dB(A)

REMARK : ¹⁾ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)

²⁾ Notification of Ministry of the Industry B.E. 2548 (2005)

³⁾ Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works
 (Measurement By Ms. Savita Kittinoavarat)



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

26/11/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ริมรั้วด้านทิศใต้

PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}

DETERMINATION METHOD : ISO 1996-1:2016

INSTRUMENT : Integrated Sound Level Meter

S/N 00322750 : Class 2

SAMPLE NO. : 20321

MEASURING DATE : 06-07/12/2024

RECEIVED DATE : 09/12/2024

REPORTED DATE : 17/12/2024

TIME \ DATE	06-07/12/2024 (L_{eq})	UNIT
09:45 - 10:45 ^{/3}	67.2	dB(A)
10:45 - 11:45	59.4	dB(A)
11:45 - 12:45	56.0	dB(A)
12:45 - 13:45	58.4	dB(A)
13:45 - 14:45	59.4	dB(A)
14:45 - 15:45	58.9	dB(A)
15:45 - 16:45	58.7	dB(A)
16:45 - 17:45	59.8	dB(A)
17:45 - 18:45	59.2	dB(A)
18:45 - 19:45	57.4	dB(A)
19:45 - 20:45	62.4	dB(A)
20:45 - 21:45	65.6	dB(A)
21:45 - 22:45	57.0	dB(A)
22:45 - 23:45	55.5	dB(A)
23:45 - 00:45	59.4	dB(A)
00:45 - 01:45	56.9	dB(A)
01:45 - 02:45	56.8	dB(A)
02:45 - 03:45	58.2	dB(A)
03:45 - 04:45	55.6	dB(A)
04:45 - 05:45	55.1	dB(A)
05:45 - 06:45	57.9	dB(A)
06:45 - 07:45	60.0	dB(A)
07:45 - 08:45	63.3	dB(A)
08:45 - 09:45	72.3	dB(A)
L_{eq} 24 hr.	62.4	dB(A)
L_{dn}	65.4	dB(A)
Standard	$70^{/1}$, $70^{/2}$	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.

(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

17/12/2024

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Request No. LA67-R0737

Report No. R6707-1402

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ริมรั้วด้านทิศตะวันออก

PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}

DETERMINATION METHOD : ISO 1996-1:2016

INSTRUMENT : Integrated Sound Level Meter

S/N 01147298 : Class 2

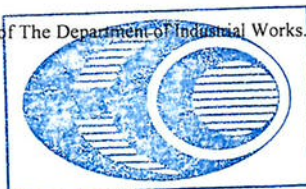
SAMPLE NO. : 22695

MEASURING DATE : 04-05/07/2024

RECEIVED DATE : 06/07/2024

REPORTED DATE : 11/07/2024

TIME \ DATE	04-05/07/2024 (L_{eq})	UNIT
10:10 - 11:10 ¹	57.8	dB(A)
11:10 - 12:10	57.2	dB(A)
12:10 - 13:10	57.8	dB(A)
13:10 - 14:10	58.8	dB(A)
14:10 - 15:10	57.9	dB(A)
15:10 - 16:10	56.7	dB(A)
16:10 - 17:10	56.5	dB(A)
17:10 - 18:10	56.5	dB(A)
18:10 - 19:10	59.6	dB(A)
19:10 - 20:10	60.6	dB(A)
20:10 - 21:10	63.7	dB(A)
21:10 - 22:10	63.9	dB(A)
22:10 - 23:10	63.9	dB(A)
23:10 - 00:10	63.8	dB(A)
00:10 - 01:10	65.6	dB(A)
01:10 - 02:10	64.8	dB(A)
02:10 - 03:10	64.5	dB(A)
03:10 - 04:10	62.4	dB(A)
04:10 - 05:10	57.9	dB(A)
05:10 - 06:10	64.3	dB(A)
06:10 - 07:10	64.3	dB(A)
07:10 - 08:10	59.5	dB(A)
08:10 - 09:10	65.8	dB(A)
09:10 - 10:10	65.5	dB(A)
L_{eq} 24 hr.	62.4	dB(A)
L_{dn}	70.0	dB(A)
Standard	$70^{1/1}, 70^{2/2}$	dB(A)

REMARK : ^{1/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{1/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{1/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Onanong Leewongsak)

บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

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Approved By

(MRS. WANPEN LHAOCHINDAWAT)

11/07/2024

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Request No. LA67-R0821

Report No. R6708-3945

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha. Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศตะวันออก
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00310456 : Class 2

SAMPLE NO. : 29325
MEASURING DATE : 07-08/08/2024
RECEIVED DATE : 08/08/2024
REPORTED DATE : 20/08/2024

TIME \ DATE	07-08/08/2024 (L_{eq})	UNIT
08:55 - 09:55 ³	58.0	dB(A)
09:55 - 10:55	58.4	dB(A)
10:55 - 11:55	56.3	dB(A)
11:55 - 12:55	56.4	dB(A)
12:55 - 13:55	57.5	dB(A)
13:55 - 14:55	59.4	dB(A)
14:55 - 15:55	58.0	dB(A)
15:55 - 16:55	55.3	dB(A)
16:55 - 17:55	54.9	dB(A)
17:55 - 18:55	57.0	dB(A)
18:55 - 19:55	54.8	dB(A)
19:55 - 20:55	62.9	dB(A)
20:55 - 21:55	64.3	dB(A)
21:55 - 22:55	64.4	dB(A)
22:55 - 23:55	64.4	dB(A)
23:55 - 00:55	64.5	dB(A)
00:55 - 01:55	64.5	dB(A)
01:55 - 02:55	64.5	dB(A)
02:55 - 03:55	63.5	dB(A)
03:55 - 04:55	56.3	dB(A)
04:55 - 05:55	62.6	dB(A)
05:55 - 06:55	64.5	dB(A)
06:55 - 07:55	60.7	dB(A)
07:55 - 08:55	60.8	dB(A)
L_{eq} 24 hr.	61.5	dB(A)
L_{dn}	69.7	dB(A)
Standard	$70^{/1} . 70^{/2}$	dB(A)

REMARK : ¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)² Notification of Ministry of the Industry B.E. 2548 (2005)³ Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Jutarat Suksaget)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

20/08/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศตะวันออก
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00322755 : Class 2

SAMPLE NO. : 32432
MEASURING DATE : 06-07/09/2024
RECEIVED DATE : 07/09/2024
REPORTED DATE : 13/09/2024

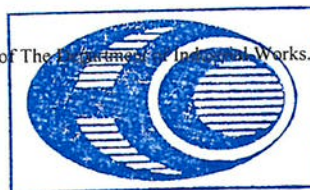
TIME \ DATE	06-07/09/2024 (L_{eq})	UNIT
10:00 - 11:00 ³	63.6	dB(A)
11:00 - 12:00	62.8	dB(A)
12:00 - 13:00	56.9	dB(A)
13:00 - 14:00	63.0	dB(A)
14:00 - 15:00	63.7	dB(A)
15:00 - 16:00	63.5	dB(A)
16:00 - 17:00	63.5	dB(A)
17:00 - 18:00	63.6	dB(A)
18:00 - 19:00	63.5	dB(A)
19:00 - 20:00	61.8	dB(A)
20:00 - 21:00	62.6	dB(A)
21:00 - 22:00	63.6	dB(A)
22:00 - 23:00	64.4	dB(A)
23:00 - 00:00	64.1	dB(A)
00:00 - 01:00	64.5	dB(A)
01:00 - 02:00	64.4	dB(A)
02:00 - 03:00	64.2	dB(A)
03:00 - 04:00	63.2	dB(A)
04:00 - 05:00	55.9	dB(A)
05:00 - 06:00	60.0	dB(A)
06:00 - 07:00	63.5	dB(A)
07:00 - 08:00	60.0	dB(A)
08:00 - 09:00	62.2	dB(A)
09:00 - 10:00	64.7	dB(A)
L_{eq} 24 hr.	63.1	dB(A)
L_{dn}	69.7	dB(A)
Standard	70 ¹ , 70 ²	dB(A)

REMARK : ¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)

² Notification of Ministry of the Industry B.E. 2548 (2005)

³ Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

13/09/2024

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Request No. LA67-R1109

Report No. R6711-0129

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A, Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : ริมรั้วด้านทิศตะวันออก
 PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr. & L_{dn}
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00322756 : Class 2

SAMPLE NO. : 40717
 MEASURING DATE : 22-23/10/2024
 RECEIVED DATE : 23/10/2024
 REPORTED DATE : 11/11/2024

TIME \ DATE	22-23/10/2024 (L_{eq})	UNIT
11:30 - 12:30 ^{/3}	58.2	dB(A)
12:30 - 13:30	60.6	dB(A)
13:30 - 14:30	61.7	dB(A)
14:30 - 15:30	61.0	dB(A)
15:30 - 16:30	67.8	dB(A)
16:30 - 17:30	56.3	dB(A)
17:30 - 18:30	56.5	dB(A)
18:30 - 19:30	58.2	dB(A)
19:30 - 20:30	65.1	dB(A)
20:30 - 21:30	64.9	dB(A)
21:30 - 22:30	64.0	dB(A)
22:30 - 23:30	64.3	dB(A)
23:30 - 00:30	64.5	dB(A)
00:30 - 01:30	65.3	dB(A)
01:30 - 02:30	72.1	dB(A)
02:30 - 03:30	65.5	dB(A)
03:30 - 04:30	63.9	dB(A)
04:30 - 05:30	63.2	dB(A)
05:30 - 06:30	64.9	dB(A)
06:30 - 07:30	63.2	dB(A)
07:30 - 08:30	65.7	dB(A)
08:30 - 09:30	66.2	dB(A)
09:30 - 10:30	65.3	dB(A)
10:30 - 11:30	65.9	dB(A)
L_{eq} 24 hr.	64.9	dB(A)
L_{dn}	72.4	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Hygiene

(Measurement By Ms. Jutarat Suksaget)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....


 (MS. APIRADEE CHUEN-AROM)

11/11/2024

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Request No. LA67-R11188

Report No. R6711-6230

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศตะวันออก
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00322746 : Class 2

SAMPLE NO. : 47131
MEASURING DATE : 20-21/11/2024
RECEIVED DATE : 22/11/2024
REPORTED DATE : 26/11/2024

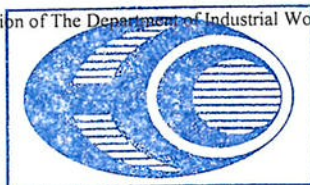
TIME \ DATE	20-21/11/2024 (L_{eq})	UNIT
09:50 - 10:50 ^{/3}	65.3	dB(A)
10:50 - 11:50	63.9	dB(A)
11:50 - 12:50	62.4	dB(A)
12:50 - 13:50	65.5	dB(A)
13:50 - 14:50	65.0	dB(A)
14:50 - 15:50	64.2	dB(A)
15:50 - 16:50	63.5	dB(A)
16:50 - 17:50	57.0	dB(A)
17:50 - 18:50	58.7	dB(A)
18:50 - 19:50	55.6	dB(A)
19:50 - 20:50	61.0	dB(A)
20:50 - 21:50	63.1	dB(A)
21:50 - 22:50	62.7	dB(A)
22:50 - 23:50	62.7	dB(A)
23:50 - 00:50	62.8	dB(A)
00:50 - 01:50	62.9	dB(A)
01:50 - 02:50	64.5	dB(A)
02:50 - 03:50	59.6	dB(A)
03:50 - 04:50	55.3	dB(A)
04:50 - 05:50	55.1	dB(A)
05:50 - 06:50	60.8	dB(A)
06:50 - 07:50	59.0	dB(A)
07:50 - 08:50	62.4	dB(A)
08:50 - 09:50	63.7	dB(A)
L_{eq} 24 hr.	62.4	dB(A)
L_{dn}	68.5	dB(A)
Standard	$70^{/1}$, $70^{/2}$	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)


^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)

^{/3} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Savita Kittinoavarat)



Approved By.....



(MRS. WANPEN LHAOCHINDAWAT)

26/11/2024

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Request No. LA67-R1262

Report No. R6712-2031

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : ริมรั้วด้านทิศตะวันออก
 PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
 DETERMINATION METHOD : ISO 1996-1:2016
 INSTRUMENT : Integrated Sound Level Meter
 S/N 00322749 : Class 2

SAMPLE NO. : 50318
 MEASURING DATE : 06-07/12/2024
 RECEIVED DATE : 09/12/2024
 REPORTED DATE : 17/12/2024

TIME \ DATE	06-07/12/2024 (L_{eq})	UNIT
09:35 - 10:35 ^{/3}	62.1	dB(A)
10:35 - 11:35	61.8	dB(A)
11:35 - 12:35	56.6	dB(A)
12:35 - 13:35	61.9	dB(A)
13:35 - 14:35	62.0	dB(A)
14:35 - 15:35	62.0	dB(A)
15:35 - 16:35	60.6	dB(A)
16:35 - 17:35	57.7	dB(A)
17:35 - 18:35	57.6	dB(A)
18:35 - 19:35	55.9	dB(A)
19:35 - 20:35	60.2	dB(A)
20:35 - 21:35	61.7	dB(A)
21:35 - 22:35	63.3	dB(A)
22:35 - 23:35	61.6	dB(A)
23:35 - 00:35	61.7	dB(A)
00:35 - 01:35	61.7	dB(A)
01:35 - 02:35	61.8	dB(A)
02:35 - 03:35	61.7	dB(A)
03:35 - 04:35	61.3	dB(A)
04:35 - 05:35	61.3	dB(A)
05:35 - 06:35	61.5	dB(A)
06:35 - 07:35	61.3	dB(A)
07:35 - 08:35	58.7	dB(A)
08:35 - 09:35	60.1	dB(A)
L_{eq} 24 hr.	61.0	dB(A)
L_{dn}	68.0	dB(A)
Standard	$70^{/1}, 70^{/2}$	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Onanong Leewongsak)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

17/12/2024

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COPY

Request No. LA67-R0737

Report No. R6707-1403

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศตะวันตก
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00209071 : Class 2

SAMPLE NO. : 22696
MEASURING DATE : 04-05/07/2024
RECEIVED DATE : 06/07/2024
REPORTED DATE : 11/07/2024

TIME \ DATE	04-05/07/2024 (L_{eq})	UNIT
10:25 - 11:25 ¹	60.5	dB(A)
11:25 - 12:25	60.5	dB(A)
12:25 - 13:25	60.3	dB(A)
13:25 - 14:25	60.8	dB(A)
14:25 - 15:25	61.2	dB(A)
15:25 - 16:25	60.7	dB(A)
16:25 - 17:25	61.6	dB(A)
17:25 - 18:25	61.6	dB(A)
18:25 - 19:25	61.4	dB(A)
19:25 - 20:25	61.7	dB(A)
20:25 - 21:25	59.5	dB(A)
21:25 - 22:25	59.5	dB(A)
22:25 - 23:25	59.4	dB(A)
23:25 - 00:25	60.0	dB(A)
00:25 - 01:25	69.9	dB(A)
01:25 - 02:25	63.1	dB(A)
02:25 - 03:25	60.4	dB(A)
03:25 - 04:25	59.3	dB(A)
04:25 - 05:25	59.9	dB(A)
05:25 - 06:25	60.4	dB(A)
06:25 - 07:25	62.6	dB(A)
07:25 - 08:25	62.8	dB(A)
08:25 - 09:25	60.5	dB(A)
09:25 - 10:25	60.4	dB(A)
L_{eq} 24 hr.	62.0	dB(A)
L_{dn}	69.5	dB(A)
Standard	70 ¹ , 70 ²	dB(A)

REMARK : ¹ Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)² Notification of Ministry of the Industry B.E. 2548 (2005)³ Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Onanong Leewongsak)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

11/07/2024

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Request No. LA67-R0821

Report No. R6708-3946

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha. Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศตะวันตก
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr. & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00310455 : Class 2

SAMPLE NO. : 29326
MEASURING DATE : 07-08/08/2024
RECEIVED DATE : 08/08/2024
REPORTED DATE : 20/08/2024

TIME \ DATE	07-08/08/2024 (L_{eq})	UNIT
08:55 - 09:55 ^{1/3}	58.7	dB(A)
09:55 - 10:55	58.4	dB(A)
10:55 - 11:55	57.5	dB(A)
11:55 - 12:55	58.0	dB(A)
12:55 - 13:55	61.8	dB(A)
13:55 - 14:55	60.5	dB(A)
14:55 - 15:55	60.2	dB(A)
15:55 - 16:55	61.1	dB(A)
16:55 - 17:55	61.7	dB(A)
17:55 - 18:55	61.0	dB(A)
18:55 - 19:55	62.6	dB(A)
19:55 - 20:55	60.2	dB(A)
20:55 - 21:55	58.6	dB(A)
21:55 - 22:55	58.6	dB(A)
22:55 - 23:55	58.4	dB(A)
23:55 - 00:55	58.6	dB(A)
00:55 - 01:55	61.0	dB(A)
01:55 - 02:55	64.4	dB(A)
02:55 - 03:55	63.1	dB(A)
03:55 - 04:55	59.9	dB(A)
04:55 - 05:55	59.0	dB(A)
05:55 - 06:55	60.8	dB(A)
06:55 - 07:55	62.8	dB(A)
07:55 - 08:55	65.4	dB(A)
L_{eq} 24 hr.	61.0	dB(A)
L_{dn}	67.4	dB(A)
Standard	$70^{1/1}$, $70^{1/2}$	dB(A)

REMARK : ^{1/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{1/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{1/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Jutarat Suksaget)

บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

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Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

20/08/2024

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Request No. LA67-R0922

Report No. R6709-1227

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukia A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศตะวันตก
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00443358 : Class 2

SAMPLE NO. : 32433
MEASURING DATE : 06-07/09/2024
RECEIVED DATE : 07/09/2024
REPORTED DATE : 13/09/2024

TIME \ DATE	06-07/09/2024 (L_{eq})	UNIT
10:00 - 11:00 ^{1/3}	60.2	dB(A)
11:00 - 12:00	59.5	dB(A)
12:00 - 13:00	58.4	dB(A)
13:00 - 14:00	59.3	dB(A)
14:00 - 15:00	60.3	dB(A)
15:00 - 16:00	60.1	dB(A)
16:00 - 17:00	59.7	dB(A)
17:00 - 18:00	60.9	dB(A)
18:00 - 19:00	60.7	dB(A)
19:00 - 20:00	61.6	dB(A)
20:00 - 21:00	62.4	dB(A)
21:00 - 22:00	58.4	dB(A)
22:00 - 23:00	56.8	dB(A)
23:00 - 00:00	56.7	dB(A)
00:00 - 01:00	57.2	dB(A)
01:00 - 02:00	59.5	dB(A)
02:00 - 03:00	62.5	dB(A)
03:00 - 04:00	63.3	dB(A)
04:00 - 05:00	62.3	dB(A)
05:00 - 06:00	60.2	dB(A)
06:00 - 07:00	59.7	dB(A)
07:00 - 08:00	63.2	dB(A)
08:00 - 09:00	62.6	dB(A)
09:00 - 10:00	58.6	dB(A)
L_{eq} 24 hr.	60.6	dB(A)
L_{dn}	66.9	dB(A)
Standard	$70^{1/1}, 70^{2/2}$	dB(A)

REMARK : ^{1/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{1/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{1/3} Start Time* Parameter Outside The Scope of The Registration of The Laboratory for Industrial Works.
(Measurement By Ms. Onanong Leewongsak)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

13/09/2024

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Request No. LA67-R1109

Report No. R6711-0130

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : ริมรั้วด้านทิศตะวันตก
PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}
DETERMINATION METHOD : ISO 1996-1:2016
INSTRUMENT : Integrated Sound Level Meter
S/N 00322744 : Class 2

SAMPLE NO. : 40718
MEASURING DATE : 22-23/10/2024
RECEIVED DATE : 23/10/2024
REPORTED DATE : 11/11/2024

TIME \ DATE	22-23/10/2024 (L_{eq})	UNIT
11:40 - 12:40 ^{/3}	59.0	dB(A)
12:40 - 13:40	59.2	dB(A)
13:40 - 14:40	59.5	dB(A)
14:40 - 15:40	60.1	dB(A)
15:40 - 16:40	69.6	dB(A)
16:40 - 17:40	62.1	dB(A)
17:40 - 18:40	60.7	dB(A)
18:40 - 19:40	61.7	dB(A)
19:40 - 20:40	61.6	dB(A)
20:40 - 21:40	60.6	dB(A)
21:40 - 22:40	59.7	dB(A)
22:40 - 23:40	59.6	dB(A)
23:40 - 00:40	58.6	dB(A)
00:40 - 01:40	58.8	dB(A)
01:40 - 02:40	58.6	dB(A)
02:40 - 03:40	58.9	dB(A)
03:40 - 04:40	58.7	dB(A)
04:40 - 05:40	58.9	dB(A)
05:40 - 06:40	59.6	dB(A)
06:40 - 07:40	60.7	dB(A)
07:40 - 08:40	60.0	dB(A)
08:40 - 09:40	61.1	dB(A)
09:40 - 10:40	61.9	dB(A)
10:40 - 11:40	61.7	dB(A)
L_{eq} 24 hr.	61.4	dB(A)
L_{dn}	66.1	dB(A)
Standard	70 ^{/1} - 70 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time

* Parameter Outside The Scope of The Registration of The Department of Industrial Hygiene
(Measurement By Ms. Jutarat Suksaget)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. APIRADEE CHUEN-AROM)

11/11/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ริมรั้วด้านทิศตะวันตก

PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}

DETERMINATION METHOD : ISO 1996-1:2016

INSTRUMENT : Integrated Sound Level Meter

S/N 00322744 : Class 2

SAMPLE NO. : 47133

MEASURING DATE : 20-21/11/2024

RECEIVED DATE : 22/11/2024

REPORTED DATE : 26/11/2024

TIME \ DATE	20-21/11/2024 (L_{eq})	UNIT
10:00 - 11:00 ^{/3}	62.6	dB(A)
11:00 - 12:00	62.5	dB(A)
12:00 - 13:00	60.0	dB(A)
13:00 - 14:00	61.6	dB(A)
14:00 - 15:00	62.1	dB(A)
15:00 - 16:00	63.0	dB(A)
16:00 - 17:00	62.0	dB(A)
17:00 - 18:00	62.2	dB(A)
18:00 - 19:00	60.3	dB(A)
19:00 - 20:00	62.0	dB(A)
20:00 - 21:00	61.8	dB(A)
21:00 - 22:00	59.0	dB(A)
22:00 - 23:00	59.2	dB(A)
23:00 - 00:00	59.2	dB(A)
00:00 - 01:00	59.1	dB(A)
01:00 - 02:00	58.7	dB(A)
02:00 - 03:00	59.1	dB(A)
03:00 - 04:00	58.6	dB(A)
04:00 - 05:00	58.6	dB(A)
05:00 - 06:00	60.4	dB(A)
06:00 - 07:00	60.8	dB(A)
07:00 - 08:00	62.9	dB(A)
08:00 - 09:00	61.2	dB(A)
09:00 - 10:00	60.3	dB(A)
L_{eq} 24 hr.	61.0	dB(A)
L_{dn}	66.0	dB(A)
Standard	$70^{/1}$, $70^{/2}$	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works
(Measurement By Ms. Savita Kittinoavarat)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

26/11/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : ริมรั้วด้านทิศตะวันตก

PARAMETER* : L_{eq} 1 hr., L_{eq} 24 hr., & L_{dn}

DETERMINATION METHOD : ISO 1996-1:2016

INSTRUMENT : Integrated Sound Level Meter

S/N 00322752 : Class 2

SAMPLE NO. : 50319

MEASURING DATE : 06-07/12/2024

RECEIVED DATE : 09/12/2024

REPORTED DATE : 17/12/2024

TIME \ DATE	06-07/12/2024 (L_{eq})	UNIT
09:50 - 10:50 ^{/3}	60.3	dB(A)
10:50 - 11:50	60.0	dB(A)
11:50 - 12:50	59.5	dB(A)
12:50 - 13:50	60.6	dB(A)
13:50 - 14:50	60.0	dB(A)
14:50 - 15:50	59.1	dB(A)
15:50 - 16:50	59.2	dB(A)
16:50 - 17:50	60.8	dB(A)
17:50 - 18:50	60.1	dB(A)
18:50 - 19:50	60.5	dB(A)
19:50 - 20:50	60.7	dB(A)
20:50 - 21:50	59.5	dB(A)
21:50 - 22:50	59.7	dB(A)
22:50 - 23:50	59.1	dB(A)
23:50 - 00:50	59.1	dB(A)
00:50 - 01:50	59.1	dB(A)
01:50 - 02:50	58.8	dB(A)
02:50 - 03:50	58.8	dB(A)
03:50 - 04:50	58.8	dB(A)
04:50 - 05:50	59.8	dB(A)
05:50 - 06:50	60.6	dB(A)
06:50 - 07:50	61.5	dB(A)
07:50 - 08:50	60.6	dB(A)
08:50 - 09:50	59.1	dB(A)
L_{eq} 24 hr.	59.9	dB(A)
L_{dn}	65.9	dB(A)
Standard	70 ^{/1} , 70 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The National Environmental Board Volume 15 B.E. 2540 (1997)^{/2} Notification of Ministry of the Industry B.E. 2548 (2005)^{/3} Start Time* Parameter Outside The Scope of The Registration of The Department of Industrial Works.
(Measurement By Ms. Onanong Leewongsak)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

COPY 17/12/2024

Request No. LA67-R0737

Report No. R6707-1400

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : Melting
 PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
 DETERMINATION METHOD : ISO 11202:2010
 INSTRUMENT : Integrated Sound Level Meter ;
 S/N 01147299 : Class 2

SAMPLE NO. : 22693
 MEASURING DATE : 04-05/07/2024
 RECEIVED DATE : 06/07/2024
 REPORTED DATE : 11/07/2024

TIME \ DATE	04-05/07/2024 (L_{eq})	UNIT
09:45 - 10:45 ³	80.0	dB(A)
10:45 - 11:45	79.2	dB(A)
11:45 - 12:45	79.6	dB(A)
12:45 - 13:45	80.4	dB(A)
13:45 - 14:45	79.2	dB(A)
14:45 - 15:45	79.6	dB(A)
15:45 - 16:45	80.0	dB(A)
16:45 - 17:45	79.6	dB(A)
17:45 - 18:45	79.6	dB(A)
18:45 - 19:45	79.8	dB(A)
19:45 - 20:45	80.6	dB(A)
20:45 - 21:45	80.3	dB(A)
21:45 - 22:45	79.7	dB(A)
22:45 - 23:45	79.7	dB(A)
23:45 - 00:45	80.1	dB(A)
00:45 - 01:45	82.5	dB(A)
01:45 - 02:45	80.7	dB(A)
02:45 - 03:45	80.1	dB(A)
03:45 - 04:45	78.9	dB(A)
04:45 - 05:45	79.9	dB(A)
05:45 - 06:45	79.0	dB(A)
06:45 - 07:45	78.9	dB(A)
07:45 - 08:45	78.3	dB(A)
08:45 - 09:45	79.5	dB(A)
L_{eq} 24 hr.	79.9	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:45 - 17:45 น. = 79 17:45 - 01:45 น. = 80 01:45 - 09:45 น. = 79	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	09:45 - 17:45 น. = 79 17:45 - 01:45 น. = 80 01:45 - 09:45 น. = 79	dB(A)
Standard L_{eq} 8 hr.	$85^{/1}$, $90^{/2}$	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009

(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

11/07/2024

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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : Melting
 PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
 DETERMINATION METHOD : ISO 11202:2010
 INSTRUMENT : Integrated Sound Level Meter :
 S/N 01209916 : Class 2

SAMPLE NO. : 29323
 MEASURING DATE : 07-08/08/2024
 RECEIVED DATE : 08/08/2024
 REPORTED DATE : 20/08/2024

TIME \ DATE	07-08/08/2024 (L_{eq})	UNIT
09:55 - 10:55 ^{1/3}	80.9	dB(A)
10:55 - 11:55	81.0	dB(A)
11:55 - 12:55	80.3	dB(A)
12:55 - 13:55	80.7	dB(A)
13:55 - 14:55	82.9	dB(A)
14:55 - 15:55	80.6	dB(A)
15:55 - 16:55	79.9	dB(A)
16:55 - 17:55	82.2	dB(A)
17:55 - 18:55	80.9	dB(A)
18:55 - 19:55	79.9	dB(A)
19:55 - 20:55	79.8	dB(A)
20:55 - 21:55	82.6	dB(A)
21:55 - 22:55	80.1	dB(A)
22:55 - 23:55	80.1	dB(A)
23:55 - 00:55	81.1	dB(A)
00:55 - 01:55	81.3	dB(A)
01:55 - 02:55	79.9	dB(A)
02:55 - 03:55	81.1	dB(A)
03:55 - 04:55	81.6	dB(A)
04:55 - 05:55	80.6	dB(A)
05:55 - 06:55	80.1	dB(A)
06:55 - 07:55	81.0	dB(A)
07:55 - 08:55	81.2	dB(A)
08:55 - 09:55	80.2	dB(A)
L_{eq} 24 hr.	80.9	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:55 - 17:55 น. = 81 17:55 - 01:55 น. = 80 01:55 - 09:55 น. = 80	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	09:55 - 17:55 น. = 81 17:55 - 01:55 น. = 80 01:55 - 09:55 น. = 80	dB(A)
Standard L_{eq} 8 hr.	85 ^{1/} , 90 ^{2/}	dB(A)

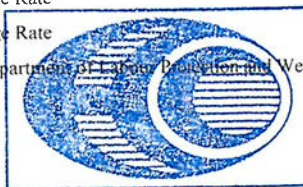
REMARK : ^{1/} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

^{2/} Notification of The Ministry of Industry B.E. 2546 (2003)^{3/} Start Time

* Based on Criteria 85 dB(A): 3 dB Exchange Rate

** Based on Criteria 90 dB(A): 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Jutarat Suksaget)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

20/08/2024

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COPY

Request No. LA67-R0922

Report No. R6709-1221

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : Melting
 PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr. SAMPLE NO. : 32427
 DETERMINATION METHOD : ISO 11202:2010 MEASURING DATE : 05-06/09/2024
 INSTRUMENT : Integrated Sound Level Meter ; RECEIVED DATE : 07/09/2024
 S/N 00322750 : Class 2 REPORTED DATE : 13/09/2024

TIME \ DATE	05-06/09/2024 (L_{eq})	UNIT
09:25 - 10:25 ¹	81.6	dB(A)
10:25 - 11:25	82.2	dB(A)
11:25 - 12:25	81.9	dB(A)
12:25 - 13:25	80.5	dB(A)
13:25 - 14:25	81.5	dB(A)
14:25 - 15:25	82.9	dB(A)
15:25 - 16:25	80.5	dB(A)
16:25 - 17:25	81.5	dB(A)
17:25 - 18:25	82.6	dB(A)
18:25 - 19:25	80.6	dB(A)
19:25 - 20:25	80.5	dB(A)
20:25 - 21:25	82.0	dB(A)
21:25 - 22:25	82.3	dB(A)
22:25 - 23:25	81.0	dB(A)
23:25 - 00:25	82.1	dB(A)
00:25 - 01:25	81.6	dB(A)
01:25 - 02:25	80.4	dB(A)
02:25 - 03:25	80.4	dB(A)
03:25 - 04:25	82.7	dB(A)
04:25 - 05:25	81.6	dB(A)
05:25 - 06:25	80.9	dB(A)
06:25 - 07:25	82.0	dB(A)
07:25 - 08:25	80.7	dB(A)
08:25 - 09:25	81.6	dB(A)
L_{eq} 24 hr.	81.6	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:25 - 17:25 น. = 81 17:25 - 01:25 น. = 81 01:25 - 09:25 น. = 81	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	09:25 - 17:25 น. = 81 17:25 - 01:25 น. = 81 01:25 - 09:25 น. = 81	dB(A)
Standard L_{eq} 8 hr.	85 ¹ , 90 ²	dB(A)

REMARK : ¹ Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

² Notification of The Ministry of Industry B.E. 2546 (2003)³ Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Onanong Leewongsak)

บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

13/09/2024

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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha. Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Melting
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter :
S/N 00222593 : Class 2

SAMPLE NO. : 40715
MEASURING DATE : 21-22/10/2024
RECEIVED DATE : 23/10/2024
REPORTED DATE : 11/11/2024

TIME \ DATE	21-22/10/2024 (L_{eq})	UNIT
11:00 - 12:00 ¹	82.0	dB(A)
12:00 - 13:00	81.6	dB(A)
13:00 - 14:00	81.4	dB(A)
14:00 - 15:00	82.2	dB(A)
15:00 - 16:00	81.2	dB(A)
16:00 - 17:00	82.7	dB(A)
17:00 - 18:00	82.0	dB(A)
18:00 - 19:00	81.9	dB(A)
19:00 - 20:00	82.0	dB(A)
20:00 - 21:00	80.9	dB(A)
21:00 - 22:00	81.8	dB(A)
22:00 - 23:00	82.4	dB(A)
23:00 - 00:00	81.3	dB(A)
00:00 - 01:00	81.0	dB(A)
01:00 - 02:00	83.0	dB(A)
02:00 - 03:00	82.2	dB(A)
03:00 - 04:00	81.8	dB(A)
04:00 - 05:00	81.3	dB(A)
05:00 - 06:00	83.0	dB(A)
06:00 - 07:00	81.4	dB(A)
07:00 - 08:00	80.9	dB(A)
08:00 - 09:00	80.6	dB(A)
09:00 - 10:00	81.2	dB(A)
10:00 - 11:00	82.2	dB(A)
L_{eq} 24 hr.	81.8	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	11:00 - 19:00 น. = 81 19:00 - 03:00 น. = 81 03:00 - 11:00 น. = 81	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	11:00 - 19:00 น. = 81 19:00 - 03:00 น. = 81 03:00 - 11:00 น. = 81	dB(A)
Standard L_{eq} 8 hr.	$85^{1/1} \cdot 90^{1/2}$	dB(A)

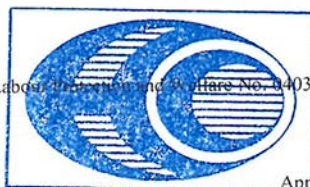
REMARK : ¹ Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

² Notification of The Ministry of Industry B.E. 2546 (2003)³ Start Time

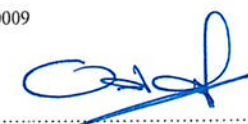
* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. B403-03-2564-0009
(Measurement By Ms. Jutarat Suksaget)

บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By.....



(MS. APIRADEE CHUEN-AROM)

11/11/2024

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Request No. LA67-R11188

Report No. R6711-6236

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Melting
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322751 : Class 2

SAMPLE NO. : 47137
MEASURING DATE : 21-22/11/2024
RECEIVED DATE : 22/11/2024
REPORTED DATE : 26/11/2024

TIME \ DATE	21-22/11/2024 (L_{eq})	UNIT
09:45 - 10:45 ^{1/3}	82.6	dB(A)
10:45 - 11:45	81.8	dB(A)
11:45 - 12:45	80.7	dB(A)
12:45 - 13:45	84.6	dB(A)
13:45 - 14:45	81.5	dB(A)
14:45 - 15:45	81.0	dB(A)
15:45 - 16:45	82.6	dB(A)
16:45 - 17:45	83.1	dB(A)
17:45 - 18:45	81.2	dB(A)
18:45 - 19:45	81.9	dB(A)
19:45 - 20:45	83.3	dB(A)
20:45 - 21:45	82.2	dB(A)
21:45 - 22:45	82.1	dB(A)
22:45 - 23:45	81.7	dB(A)
23:45 - 00:45	83.8	dB(A)
00:45 - 01:45	81.2	dB(A)
01:45 - 02:45	81.5	dB(A)
02:45 - 03:45	84.2	dB(A)
03:45 - 04:45	81.3	dB(A)
04:45 - 05:45	80.9	dB(A)
05:45 - 06:45	82.7	dB(A)
06:45 - 07:45	83.6	dB(A)
07:45 - 08:45	80.7	dB(A)
08:45 - 09:45	80.7	dB(A)
L_{eq} 24 hr.	82.3	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:45 - 17:45 น. = 82 17:45 - 01:45 น. = 82 01:45 - 09:45 น. = 82	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	09:45 - 17:45 น. = 82 17:45 - 01:45 น. = 82 01:45 - 09:45 น. = 82	dB(A)
Standard L_{eq} 8 hr.	$85^{/1}$, $90^{/2}$	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Savita Kittinoavarat)



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

26/11/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : Melting

PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.

DETERMINATION METHOD : ISO 11202:2010

INSTRUMENT : Integrated Sound Level Meter ;

S/N 00322755 : Class 2

SAMPLE NO. : 50317

MEASURING DATE : 06-07/12/2024

RECEIVED DATE : 09/12/2024

REPORTED DATE : 17/12/2024

TIME \ DATE	06-07/12/2024 (L_{eq})	UNIT
09:15 - 10:15 ^{1/3}	82.6	dB(A)
10:15 - 11:15	80.5	dB(A)
11:15 - 12:15	80.3	dB(A)
12:15 - 13:15	81.1	dB(A)
13:15 - 14:15	80.9	dB(A)
14:15 - 15:15	80.8	dB(A)
15:15 - 16:15	80.9	dB(A)
16:15 - 17:15	80.4	dB(A)
17:15 - 18:15	83.3	dB(A)
18:15 - 19:15	79.4	dB(A)
19:15 - 20:15	79.3	dB(A)
20:15 - 21:15	80.8	dB(A)
21:15 - 22:15	84.2	dB(A)
22:15 - 23:15	80.5	dB(A)
23:15 - 00:15	82.1	dB(A)
00:15 - 01:15	83.8	dB(A)
01:15 - 02:15	80.8	dB(A)
02:15 - 03:15	81.2	dB(A)
03:15 - 04:15	83.9	dB(A)
04:15 - 05:15	79.8	dB(A)
05:15 - 06:15	80.3	dB(A)
06:15 - 07:15	82.6	dB(A)
07:15 - 08:15	82.0	dB(A)
08:15 - 09:15	80.6	dB(A)
L_{eq} 24 hr.	81.6	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:15 - 17:15 L_{eq} = 80 17:15 - 01:15 L_{eq} = 82 01:15 - 09:15 L_{eq} = 81	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	09:15 - 17:15 L_{eq} = 80 17:15 - 01:15 L_{eq} = 81 01:15 - 09:15 L_{eq} = 81	dB(A)
Standard L_{eq} 8 hr.	85 ^{1/1} , 90 ^{2/2}	dB(A)

REMARK : ^{1/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

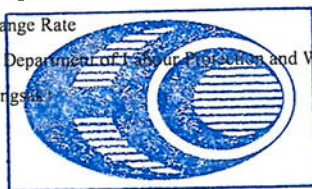
(Published in the Government Gazette on January 26, 2018)

^{2/2} Notification of The Ministry of Industry B.E. 2546 (2003)^{3/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Ms. Onanong Leewongsa)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

17/12/2024

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Request No. LA67-R0737

Report No. R6707-1406

TEST REPORT

CUSTOMER	: Siam Poongsan Metal Co., Ltd.	SAMPLE NO.	: 22699
ADDRESS	: 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230	MEASURING DATE	: 05-06/07/2024
SAMPLE SOURCE	: Siam Poongsan Metal Co., Ltd.	RECEIVED DATE	: 06/07/2024
SAMPLE POINT	: Casting	REPORTED DATE	: 11/07/2024
PARAMETER***	: L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.		
DETERMINATION METHOD	: ISO 11202:2010		
INSTRUMENT	: Integrated Sound Level Meter ; S/N 00322754 : Class 2		

TIME \ DATE	05-06/07/2024 (L_{eq})	UNIT
09:20 - 10:20 ¹	83.5	dB(A)
10:20 - 11:20	81.9	dB(A)
11:20 - 12:20	81.2	dB(A)
12:20 - 13:20	81.0	dB(A)
13:20 - 14:20	82.9	dB(A)
14:20 - 15:20	81.7	dB(A)
15:20 - 16:20	82.1	dB(A)
16:20 - 17:20	83.2	dB(A)
17:20 - 18:20	82.7	dB(A)
18:20 - 19:20	81.7	dB(A)
19:20 - 20:20	81.8	dB(A)
20:20 - 21:20	82.4	dB(A)
21:20 - 22:20	83.4	dB(A)
22:20 - 23:20	82.1	dB(A)
23:20 - 00:20	82.7	dB(A)
00:20 - 01:20	82.1	dB(A)
01:20 - 02:20	82.1	dB(A)
02:20 - 03:20	82.0	dB(A)
03:20 - 04:20	83.4	dB(A)
04:20 - 05:20	82.2	dB(A)
05:20 - 06:20	82.1	dB(A)
06:20 - 07:20	82.1	dB(A)
07:20 - 08:20	83.1	dB(A)
08:20 - 09:20	82.7	dB(A)
L_{eq} 24 hr.	82.4	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1}	09:20 - 17:20 น. = 82 17:20 - 01:20 น. = 82 01:20 - 09:20 น. = 82	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2}	09:20 - 17:20 น. = 82 17:20 - 01:20 น. = 82 01:20 - 09:20 น. = 82	dB(A)
Standard L_{eq} 8 hr.	85 ¹ , 90 ²	dB(A)

REMARK : ¹ Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

² Notification of The Ministry of Industry B.E. 2546 (2003)³ Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Onanong Leewongsak)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

11/07/2024

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TEST REPORT

CUSTOMER	: Siam Poongsan Metal Co., Ltd.	SAMPLE NO.	: 29322
ADDRESS	: 38/14 Moo 5 T. Tungsukla A. Sriracha. Chonburi 20230	MEASURING DATE	: 07-08/08/2024
SAMPLE SOURCE	: Siam Poongsan Metal Co., Ltd.	RECEIVED DATE	: 08/08/2024
SAMPLE POINT	: Casting	REPORTED DATE	: 20/08/2024
PARAMETER***	: L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.		
DETERMINATION METHOD	: ISO 11202:2010		
INSTRUMENT	: Integrated Sound Level Meter :		
	S/N 00443358 : Class 2		

TIME \ DATE	07-08/08/2024 (L_{eq})	UNIT
10:00 - 11:00 ^{/3}	80.8	dB(A)
11:00 - 12:00	80.8	dB(A)
12:00 - 13:00	80.8	dB(A)
13:00 - 14:00	80.8	dB(A)
14:00 - 15:00	81.0	dB(A)
15:00 - 16:00	81.5	dB(A)
16:00 - 17:00	82.0	dB(A)
17:00 - 18:00	82.8	dB(A)
18:00 - 19:00	82.4	dB(A)
19:00 - 20:00	80.4	dB(A)
20:00 - 21:00	81.4	dB(A)
21:00 - 22:00	82.2	dB(A)
22:00 - 23:00	82.5	dB(A)
23:00 - 00:00	82.7	dB(A)
00:00 - 01:00	82.9	dB(A)
01:00 - 02:00	81.2	dB(A)
02:00 - 03:00	82.3	dB(A)
03:00 - 04:00	82.8	dB(A)
04:00 - 05:00	82.4	dB(A)
05:00 - 06:00	81.9	dB(A)
06:00 - 07:00	82.3	dB(A)
07:00 - 08:00	81.6	dB(A)
08:00 - 09:00	82.7	dB(A)
09:00 - 10:00	82.3	dB(A)
L_{eq} 24 hr.	81.9	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	10:00 - 18:00 น. = 81 18:00 - 02:00 น. = 82 02:00 - 10:00 น. = 82	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	10:00 - 18:00 น. = 81 18:00 - 02:00 น. = 82 02:00 - 10:00 น. = 82	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

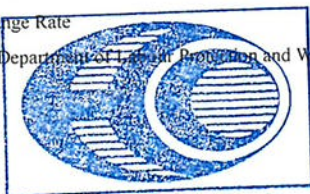
REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)^{/3} Start Time

* Based on Criteria 85 dB(A): 3 dB Exchange Rate

** Based on Criteria 90 dB(A): 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Jutarat Suksaget)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

20/08/2024

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COPY

Request No. LA67-R0922

Report No. R6709-I222

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Casting
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter :
S/N 00322755 : Class 2

SAMPLE NO. : 32428
MEASURING DATE : 05-06/09/2024
RECEIVED DATE : 07/09/2024
REPORTED DATE : 13/09/2024

TIME \ DATE	05-06/09/2024 (L_{eq})	UNIT
09:35 - 10:35 ^{/3}	80.7	dB(A)
10:35 - 11:35	81.6	dB(A)
11:35 - 12:35	80.7	dB(A)
12:35 - 13:35	80.5	dB(A)
13:35 - 14:35	81.2	dB(A)
14:35 - 15:35	81.2	dB(A)
15:35 - 16:35	80.4	dB(A)
16:35 - 17:35	81.4	dB(A)
17:35 - 18:35	81.0	dB(A)
18:35 - 19:35	80.4	dB(A)
19:35 - 20:35	80.2	dB(A)
20:35 - 21:35	81.7	dB(A)
21:35 - 22:35	81.2	dB(A)
22:35 - 23:35	81.3	dB(A)
23:35 - 00:35	81.7	dB(A)
00:35 - 01:35	80.6	dB(A)
01:35 - 02:35	80.1	dB(A)
02:35 - 03:35	80.3	dB(A)
03:35 - 04:35	81.7	dB(A)
04:35 - 05:35	81.0	dB(A)
05:35 - 06:35	80.3	dB(A)
06:35 - 07:35	81.8	dB(A)
07:35 - 08:35	82.1	dB(A)
08:35 - 09:35	81.2	dB(A)
L_{eq} 24 hr.	81.1	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:35 - 17:35 น. = 80 17:35 - 01:35 น. = 81 01:35 - 09:35 น. = 81	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	09:35 - 17:35 น. = 80 17:35 - 01:35 น. = 81 01:35 - 09:35 น. = 81	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

13/09/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha. Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Casting
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter :
S/N 00322756 : Class 2

SAMPLE NO. : 40714
MEASURING DATE : 21-22/10/2024
RECEIVED DATE : 23/10/2024
REPORTED DATE : 11/11/2024

TIME \ DATE	21-22/10/2024 (L_{eq})	UNIT
11:00 - 12:00 ³	81.1	dB(A)
12:00 - 13:00	81.0	dB(A)
13:00 - 14:00	80.4	dB(A)
14:00 - 15:00	80.6	dB(A)
15:00 - 16:00	80.9	dB(A)
16:00 - 17:00	81.1	dB(A)
17:00 - 18:00	80.0	dB(A)
18:00 - 19:00	80.2	dB(A)
19:00 - 20:00	82.3	dB(A)
20:00 - 21:00	83.0	dB(A)
21:00 - 22:00	81.2	dB(A)
22:00 - 23:00	80.6	dB(A)
23:00 - 00:00	81.5	dB(A)
00:00 - 01:00	81.8	dB(A)
01:00 - 02:00	84.4	dB(A)
02:00 - 03:00	84.6	dB(A)
03:00 - 04:00	83.8	dB(A)
04:00 - 05:00	82.4	dB(A)
05:00 - 06:00	82.8	dB(A)
06:00 - 07:00	82.4	dB(A)
07:00 - 08:00	82.7	dB(A)
08:00 - 09:00	82.5	dB(A)
09:00 - 10:00	81.5	dB(A)
10:00 - 11:00	81.8	dB(A)
L_{eq} 24 hr.	82.0	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	11:00 - 19:00 น. = 80 19:00 - 03:00 น. = 82 03:00 - 11:00 น. = 82	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	11:00 - 19:00 น. = 80 19:00 - 03:00 น. = 82 03:00 - 11:00 น. = 82	dB(A)
Standard L_{eq} 8 hr.	85 ^{1/} , 90 ^{2/}	dB(A)

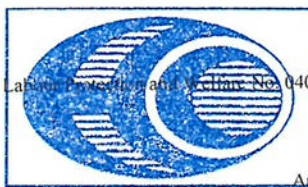
REMARK : ^{1/} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

^{2/} Notification of The Ministry of Industry B.E. 2546 (2003)^{3/} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Jutarat Suksaget)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. APIRADEE CHUEN-AROM)

11/11/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : Casting
 PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
 DETERMINATION METHOD : ISO 11202:2010
 INSTRUMENT : Integrated Sound Level Meter :
 S/N 00322752 : Class 2

SAMPLE NO. : 47138
 MEASURING DATE : 21-22/11/2024
 RECEIVED DATE : 22/11/2024
 REPORTED DATE : 26/11/2024

TIME \ DATE	21-22/11/2024 (L_{eq})	UNIT
09:45 - 10:45 ^{/3}	81.8	dB(A)
10:45 - 11:45	80.9	dB(A)
11:45 - 12:45	80.5	dB(A)
12:45 - 13:45	81.7	dB(A)
13:45 - 14:45	80.5	dB(A)
14:45 - 15:45	80.6	dB(A)
15:45 - 16:45	81.4	dB(A)
16:45 - 17:45	80.6	dB(A)
17:45 - 18:45	80.7	dB(A)
18:45 - 19:45	81.9	dB(A)
19:45 - 20:45	82.5	dB(A)
20:45 - 21:45	81.2	dB(A)
21:45 - 22:45	80.9	dB(A)
22:45 - 23:45	81.4	dB(A)
23:45 - 00:45	80.8	dB(A)
00:45 - 01:45	80.8	dB(A)
01:45 - 02:45	81.4	dB(A)
02:45 - 03:45	81.3	dB(A)
03:45 - 04:45	80.5	dB(A)
04:45 - 05:45	80.6	dB(A)
05:45 - 06:45	81.9	dB(A)
06:45 - 07:45	81.0	dB(A)
07:45 - 08:45	80.4	dB(A)
08:45 - 09:45	80.5	dB(A)
L_{eq} 24 hr.	81.1	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:45 - 17:45 L_{eq} = 81 17:45 - 01:45 L_{eq} = 81 01:45 - 09:45 L_{eq} = 80	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	09:45 - 17:45 L_{eq} = 81 17:45 - 01:45 L_{eq} = 81 01:45 - 09:45 L_{eq} = 80	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Ms. Savita Kittinoavarat)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By: 
 (MRS. WANPEN LHAOCHINDAWAT)

26/11/2024

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TEST REPORT

CUSTOMER	: Siam Poongsan Metal Co., Ltd.		
ADDRESS	: 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230		
SAMPLE SOURCE	: Siam Poongsan Metal Co., Ltd.		
SAMPLE POINT	: Casting		
PARAMETER***	: L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.	SAMPLE NO.	: 50316
DETERMINATION METHOD	: ISO 11202:2010	MEASURING DATE	: 06-07/12/2024
INSTRUMENT	: Integrated Sound Level Meter ;	RECEIVED DATE	: 09/12/2024
	S/N 00222593 : Class 2	REPORTED DATE	: 17/12/2024

TIME \ DATE	06-07/12/2024 (L_{eq})	UNIT
09:25 - 10:25 ^{1/3}	82.7	dB(A)
10:25 - 11:25	82.0	dB(A)
11:25 - 12:25	82.5	dB(A)
12:25 - 13:25	82.1	dB(A)
13:25 - 14:25	82.5	dB(A)
14:25 - 15:25	82.3	dB(A)
15:25 - 16:25	82.7	dB(A)
16:25 - 17:25	82.3	dB(A)
17:25 - 18:25	81.7	dB(A)
18:25 - 19:25	82.2	dB(A)
19:25 - 20:25	81.2	dB(A)
20:25 - 21:25	81.6	dB(A)
21:25 - 22:25	82.3	dB(A)
22:25 - 23:25	81.7	dB(A)
23:25 - 00:25	81.9	dB(A)
00:25 - 01:25	82.6	dB(A)
01:25 - 02:25	81.8	dB(A)
02:25 - 03:25	81.9	dB(A)
03:25 - 04:25	82.4	dB(A)
04:25 - 05:25	82.1	dB(A)
05:25 - 06:25	82.0	dB(A)
06:25 - 07:25	81.8	dB(A)
07:25 - 08:25	81.5	dB(A)
08:25 - 09:25	82.4	dB(A)
L_{eq} 24 hr.	82.1	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1/1}	09:25 - 17:25 น. = 82 17:25 - 01:25 น. = 81 01:25 - 09:25 น. = 81	dB(A)
L_{eq} 8 hr. (TWA) ^{**,1/2}	09:25 - 17:25 น. = 82 17:25 - 01:25 น. = 81 01:25 - 09:25 น. = 81	dB(A)
Standard L_{eq} 8 hr.	85 ^{1/1} , 90 ^{2/2}	dB(A)

REMARK : ^{1/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

^{1/2} Notification of The Ministry of Industry B.E. 2546 (2003)^{1/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Onanong Leewongsak)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWA I)

17/12/2024

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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : RM01
 PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
 DETERMINATION METHOD : ISO 11202:2010
 INSTRUMENT : Integrated Sound Level Meter ;
 S/N 00310458 : Class 2

SAMPLE NO. : 22698
 MEASURING DATE : 04-05/07/2024
 RECEIVED DATE : 06/07/2024
 REPORTED DATE : 11/07/2024

TIME \ DATE	04-05/07/2024 (L_{eq})	UNIT
10:00 - 11:00 ¹	82.4	dB(A)
11:00 - 12:00	80.9	dB(A)
12:00 - 13:00	82.4	dB(A)
13:00 - 14:00	81.9	dB(A)
14:00 - 15:00	82.0	dB(A)
15:00 - 16:00	82.2	dB(A)
16:00 - 17:00	82.2	dB(A)
17:00 - 18:00	80.9	dB(A)
18:00 - 19:00	82.2	dB(A)
19:00 - 20:00	81.4	dB(A)
20:00 - 21:00	82.1	dB(A)
21:00 - 22:00	82.0	dB(A)
22:00 - 23:00	82.2	dB(A)
23:00 - 00:00	82.0	dB(A)
00:00 - 01:00	81.4	dB(A)
01:00 - 02:00	82.5	dB(A)
02:00 - 03:00	81.6	dB(A)
03:00 - 04:00	81.2	dB(A)
04:00 - 05:00	82.1	dB(A)
05:00 - 06:00	82.2	dB(A)
06:00 - 07:00	82.3	dB(A)
07:00 - 08:00	80.4	dB(A)
08:00 - 09:00	81.9	dB(A)
09:00 - 10:00	82.3	dB(A)
L_{eq} 24 hr.	81.9	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1}	10:00 - 18:00 น. = 81 18:00 - 02:00 น. = 81 02:00 - 10:00 น. = 81	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2}	10:00 - 18:00 น. = 81 18:00 - 02:00 น. = 81 02:00 - 10:00 น. = 81	dB(A)
Standard L_{eq} 8 hr.	85 ¹ , 90 ²	dB(A)

REMARK :

¹ Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
 (Published in the Government Gazette on January 26, 2018)

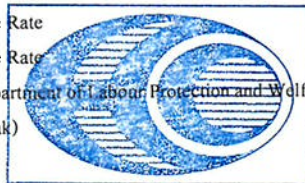
² Notification of The Ministry of Industry B.E. 2546 (2003)

³ Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

11/07/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : RM01
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322752 : Class 2

SAMPLE NO. : 29192
MEASURING DATE : 03-04/08/2024
RECEIVED DATE : 04/08/2024
REPORTED DATE : 08/08/2024

TIME \ DATE	03-04/08/2024 (L_{eq})	UNIT
08:30 - 09:30 ^{/3}	83.4	dB(A)
09:30 - 10:30	83.4	dB(A)
10:30 - 11:30	83.0	dB(A)
11:30 - 12:30	82.2	dB(A)
12:30 - 13:30	83.1	dB(A)
13:30 - 14:30	83.4	dB(A)
14:30 - 15:30	84.5	dB(A)
15:30 - 16:30	84.7	dB(A)
16:30 - 17:30	83.6	dB(A)
17:30 - 18:30	83.2	dB(A)
18:30 - 19:30	83.6	dB(A)
19:30 - 20:30	82.2	dB(A)
20:30 - 21:30	83.4	dB(A)
21:30 - 22:30	83.7	dB(A)
22:30 - 23:30	84.0	dB(A)
23:30 - 00:30	83.3	dB(A)
00:30 - 01:30	83.7	dB(A)
01:30 - 02:30	83.8	dB(A)
02:30 - 03:30	83.0	dB(A)
03:30 - 04:30	84.0	dB(A)
04:30 - 05:30	84.0	dB(A)
05:30 - 06:30	84.1	dB(A)
06:30 - 07:30	83.9	dB(A)
07:30 - 08:30	83.0	dB(A)
L_{eq} 24 hr.	83.5	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	08:30 - 16:30 น. = 83 16:30 - 00:30 น. = 83 00:30 - 08:30 น. = 83	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	08:30 - 16:30 น. = 83 16:30 - 00:30 น. = 83 00:30 - 08:30 น. = 83	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

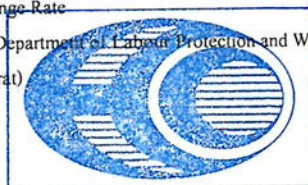
REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Savita Kittinoavarat)Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

08/08/2024

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Request No. LA67-R0922

Report No. R6709-1223

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : RM01
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00222594 : Class 2

SAMPLE NO. : 32429
MEASURING DATE : 05-06/09/2024
RECEIVED DATE : 07/09/2024
REPORTED DATE : 13/09/2024

TIME \ DATE	05-06/09/2024 (L_{eq})	UNIT
09:20 - 10:20 ^{/3}	82.2	dB(A)
10:20 - 11:20	83.0	dB(A)
11:20 - 12:20	82.6	dB(A)
12:20 - 13:20	83.2	dB(A)
13:20 - 14:20	83.0	dB(A)
14:20 - 15:20	82.2	dB(A)
15:20 - 16:20	82.8	dB(A)
16:20 - 17:20	82.5	dB(A)
17:20 - 18:20	82.2	dB(A)
18:20 - 19:20	82.6	dB(A)
19:20 - 20:20	81.9	dB(A)
20:20 - 21:20	82.8	dB(A)
21:20 - 22:20	82.7	dB(A)
22:20 - 23:20	82.7	dB(A)
23:20 - 00:20	81.7	dB(A)
00:20 - 01:20	82.9	dB(A)
01:20 - 02:20	82.8	dB(A)
02:20 - 03:20	82.9	dB(A)
03:20 - 04:20	82.5	dB(A)
04:20 - 05:20	82.4	dB(A)
05:20 - 06:20	82.7	dB(A)
06:20 - 07:20	82.8	dB(A)
07:20 - 08:20	81.9	dB(A)
08:20 - 09:20	82.8	dB(A)
L_{eq} 24 hr.	82.6	dB(A)
L_{eq} 8 hr. (TWA) ^{*,/1}	09:20 - 17:20 น. = 82 17:20 - 01:20 น. = 82 01:20 - 09:20 น. = 82	dB(A)
L_{eq} 8 hr. (TWA) ^{**,/2}	09:20 - 17:20 น. = 82 17:20 - 01:20 น. = 82 01:20 - 09:20 น. = 82	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK :

^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

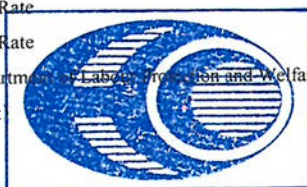
^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

13/09/2024

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Request No. LA67-R11188

Report No. R6711-6233

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : RM01
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322752 : Class 2

SAMPLE NO. : 47134
MEASURING DATE : 20-21/11/2024
RECEIVED DATE : 22/11/2024
REPORTED DATE : 26/11/2024

TIME \ DATE	20-21/11/2024 (L_{eq})	UNIT
09:20 - 10:20 ^{1/3}	81.9	dB(A)
10:20 - 11:20	81.7	dB(A)
11:20 - 12:20	81.5	dB(A)
12:20 - 13:20	82.0	dB(A)
13:20 - 14:20	82.1	dB(A)
14:20 - 15:20	81.7	dB(A)
15:20 - 16:20	82.4	dB(A)
16:20 - 17:20	81.7	dB(A)
17:20 - 18:20	81.9	dB(A)
18:20 - 19:20	82.4	dB(A)
19:20 - 20:20	81.7	dB(A)
20:20 - 21:20	82.5	dB(A)
21:20 - 22:20	82.0	dB(A)
22:20 - 23:20	81.9	dB(A)
23:20 - 00:20	81.4	dB(A)
00:20 - 01:20	83.1	dB(A)
01:20 - 02:20	83.0	dB(A)
02:20 - 03:20	82.1	dB(A)
03:20 - 04:20	81.3	dB(A)
04:20 - 05:20	82.1	dB(A)
05:20 - 06:20	82.5	dB(A)
06:20 - 07:20	82.8	dB(A)
07:20 - 08:20	81.3	dB(A)
08:20 - 09:20	83.1	dB(A)
L_{eq} 24 hr.	82.1	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:20 - 17:20 L_{eq} = 81 17:20 - 01:20 L_{eq} = 82 01:20 - 09:20 L_{eq} = 82	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	09:20 - 17:20 L_{eq} = 81 17:20 - 01:20 L_{eq} = 82 01:20 - 09:20 L_{eq} = 82	dB(A)
Standard L_{eq} 8 hr.	85 ^{1/} , 90 ^{2/}	dB(A)

REMARK : ^{1/} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

^{2/} Notification of The Ministry of Industry B.E. 2546 (2003)^{3/} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009

(Measurement By Ms. Savita Kittinoavara)



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

26/11/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : RM01
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00222594 : Class 2

SAMPLE NO. : 50322
MEASURING DATE : 07-08/12/2024
RECEIVED DATE : 09/12/2024
REPORTED DATE : 17/12/2024

TIME \ DATE	07-08/12/2024 (L_{eq})	UNIT
08:35 - 09:35 ^{1/3}	81.4	dB(A)
09:35 - 10:35	82.0	dB(A)
10:35 - 11:35	81.5	dB(A)
11:35 - 12:35	81.6	dB(A)
12:35 - 13:35	81.7	dB(A)
13:35 - 14:35	80.0	dB(A)
14:35 - 15:35	81.4	dB(A)
15:35 - 16:35	81.1	dB(A)
16:35 - 17:35	79.9	dB(A)
17:35 - 18:35	81.9	dB(A)
18:35 - 19:35	81.2	dB(A)
19:35 - 20:35	79.6	dB(A)
20:35 - 21:35	82.7	dB(A)
21:35 - 22:35	82.4	dB(A)
22:35 - 23:35	81.8	dB(A)
23:35 - 00:35	82.1	dB(A)
00:35 - 01:35	82.4	dB(A)
01:35 - 02:35	82.1	dB(A)
02:35 - 03:35	82.0	dB(A)
03:35 - 04:35	81.2	dB(A)
04:35 - 05:35	81.1	dB(A)
05:35 - 06:35	82.0	dB(A)
06:35 - 07:35	82.3	dB(A)
07:35 - 08:35	80.8	dB(A)
L_{eq} 24 hr.	81.6	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	08:35 - 16:35 น. = 81 16:35 - 00:35 น. = 81 00:35 - 08:35 น. = 81	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	08:35 - 16:35 น. = 81 16:35 - 00:35 น. = 81 00:35 - 08:35 น. = 81	dB(A)
Standard L_{eq} 8 hr.	85 ^{1/} , 90 ^{2/}	dB(A)

REMARK : ^{1/} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

^{2/} Notification of The Ministry of Industry B.E. 2546 (2003)

^{3/} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

17/12/2024

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683 หมู่ 11 ต.สุขาภิบาล 8 ต.หนองขาม อ.ศรีราชา จ.ชลบุรี 20230
 โทร. 0-3848-1197, 0-3876-3031-2 แฟกซ์ : 0-3848-2095
 เว็บไซต์ : http://www.etc1992.com อี-เมล : info@etc1992.com

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683 Moo 11 Sukhapibarn 8 Rd., Nongkham, Sriracha, 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-R1262

Report No. R6712-2036

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : RM01
 PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
 DETERMINATION METHOD : ISO 11202:2010
 INSTRUMENT : Integrated Sound Level Meter ;
 S/N 00222594 : Class 2

SAMPLE NO. : 50323
 MEASURING DATE : 08-09/12/2024
 RECEIVED DATE : 09/12/2024
 REPORTED DATE : 17/12/2024

TIME \ DATE	08-09/12/2024 (L_{eq})	UNIT
08:35 - 09:35 ¹	82.0	dB(A)
09:35 - 10:35	81.5	dB(A)
10:35 - 11:35	80.8	dB(A)
11:35 - 12:35	81.6	dB(A)
12:35 - 13:35	81.7	dB(A)
13:35 - 14:35	81.1	dB(A)
14:35 - 15:35	82.0	dB(A)
15:35 - 16:35	82.0	dB(A)
16:35 - 17:35	81.2	dB(A)
17:35 - 18:35	82.0	dB(A)
18:35 - 19:35	82.2	dB(A)
19:35 - 20:35	81.0	dB(A)
20:35 - 21:35	81.8	dB(A)
21:35 - 22:35	82.3	dB(A)
22:35 - 23:35	81.7	dB(A)
23:35 - 00:35	82.0	dB(A)
00:35 - 01:35	82.2	dB(A)
01:35 - 02:35	81.6	dB(A)
02:35 - 03:35	82.4	dB(A)
03:35 - 04:35	81.5	dB(A)
04:35 - 05:35	80.5	dB(A)
05:35 - 06:35	82.2	dB(A)
06:35 - 07:35	81.2	dB(A)
07:35 - 08:35	80.6	dB(A)
L_{eq} 24 hr.	81.7	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1}	08:35 - 16:35 น. = 81 16:35 - 00:35 น. = 81 00:35 - 08:35 น. = 81	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2}	08:35 - 16:35 น. = 81 16:35 - 00:35 น. = 81 00:35 - 08:35 น. = 81	dB(A)
Standard L_{eq} 8 hr.	85 ¹ , 90 ²	dB(A)

REMARK : ¹ Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
 (Published in the Government Gazette on January 26, 2018)

² Notification of The Ministry of Industry B.E. 2546 (2003)

³ Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
 (Measurement By Ms. Onanong Leewongsak)



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Approved By: 
 (MRS. WANPEN LHAOCHINDAWA I)

17/12/2024

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Request No. LA67-R0871

Report No. R6708-5446

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha. Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : BK06
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter :
S/N 00322745 : Class 2

SAMPLE NO. : 30842
MEASURING DATE : 20-21/08/2024
RECEIVED DATE : 22/08/2024
REPORTED DATE : 29/08/2024

TIME \ DATE	20-21/08/2024 (L_{eq})	UNIT
08:45 - 09:45 ^{/3}	89.8	dB(A)
09:45 - 10:45	89.9	dB(A)
10:45 - 11:45	87.8	dB(A)
11:45 - 12:45	86.8	dB(A)
12:45 - 13:45	89.7	dB(A)
13:45 - 14:45	90.4	dB(A)
14:45 - 15:45	89.5	dB(A)
15:45 - 16:45	86.7	dB(A)
16:45 - 17:45	86.5	dB(A)
17:45 - 18:45	85.7	dB(A)
18:45 - 19:45	80.6	dB(A)
19:45 - 20:45	87.4	dB(A)
20:45 - 21:45	89.3	dB(A)
21:45 - 22:45	89.8	dB(A)
22:45 - 23:45	90.2	dB(A)
23:45 - 00:45	89.8	dB(A)
00:45 - 01:45	90.0	dB(A)
01:45 - 02:45	87.7	dB(A)
02:45 - 03:45	78.2	dB(A)
03:45 - 04:45	78.5	dB(A)
04:45 - 05:45	79.9	dB(A)
05:45 - 06:45	87.8	dB(A)
06:45 - 07:45	81.0	dB(A)
07:45 - 08:45	87.8	dB(A)
L_{eq} 24 hr.	87.9	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	08:45 - 16:45 น. = 89 16:45 - 00:45 น. = 88 00:45 - 08:45 น. = 85	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	08:45 - 16:45 น. = 88 16:45 - 00:45 น. = 87 00:45 - 08:45 น. = 85	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)^{/3} Start Time

* Based on Criteria 85 dB(A): 3 dB Exchange Rate

** Based on Criteria 90 dB(A): 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009

(Measurement By Ms. Savita Kittinoavarat)



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

29/08/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : BK10
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter :
S/N 00209079 : Class 2

SAMPLE NO. : 32430
MEASURING DATE : 06-07/09/2024
RECEIVED DATE : 07/09/2024
REPORTED DATE : 13/09/2024

TIME \ DATE	06-07/09/2024 (L_{eq})	UNIT
09:40 - 10:40 ^{1/3}	83.3	dB(A)
10:40 - 11:40	83.1	dB(A)
11:40 - 12:40	81.5	dB(A)
12:40 - 13:40	83.6	dB(A)
13:40 - 14:40	84.6	dB(A)
14:40 - 15:40	84.4	dB(A)
15:40 - 16:40	82.6	dB(A)
16:40 - 17:40	81.7	dB(A)
17:40 - 18:40	81.1	dB(A)
18:40 - 19:40	84.9	dB(A)
19:40 - 20:40	78.8	dB(A)
20:40 - 21:40	84.8	dB(A)
21:40 - 22:40	84.7	dB(A)
22:40 - 23:40	84.0	dB(A)
23:40 - 00:40	83.5	dB(A)
00:40 - 01:40	84.5	dB(A)
01:40 - 02:40	84.0	dB(A)
02:40 - 03:40	84.1	dB(A)
03:40 - 04:40	82.4	dB(A)
04:40 - 05:40	78.1	dB(A)
05:40 - 06:40	80.3	dB(A)
06:40 - 07:40	82.8	dB(A)
07:40 - 08:40	78.3	dB(A)
08:40 - 09:40	83.6	dB(A)
L_{eq} 24 hr.	83.1	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1/}	09:40 - 17:40 น. = 83 17:40 - 01:40 น. = 83 01:40 - 09:40 น. = 82	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2/}	09:40 - 17:40 น. = 83 17:40 - 01:40 น. = 83 01:40 - 09:40 น. = 82	dB(A)
Standard L_{eq} 8 hr.	85 ^{1/} , 90 ^{2/}	dB(A)

REMARK : ^{1/} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

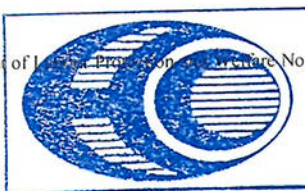
^{2/} Notification of The Ministry of Industry B.E. 2546 (2003)

^{3/} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By: 
(MRS. WANPEN LHAOCHINDAWAT)

13/09/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : BK03

PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.

DETERMINATION METHOD : ISO 11202:2010

INSTRUMENT : Integrated Sound Level Meter ;

S/N 00310455 : Class 2

SAMPLE NO. : 40017

MEASURING DATE : 18-19/10/2024

RECEIVED DATE : 19/10/2024

REPORTED DATE : 31/10/2024

TIME \ DATE	18-19/10/2024 (L_{eq})	UNIT
09:00 - 10:00 ^{/3}	82.5	dB(A)
10:00 - 11:00	83.3	dB(A)
11:00 - 12:00	82.4	dB(A)
12:00 - 13:00	77.0	dB(A)
13:00 - 14:00	81.9	dB(A)
14:00 - 15:00	79.4	dB(A)
15:00 - 16:00	81.8	dB(A)
16:00 - 17:00	83.8	dB(A)
17:00 - 18:00	81.7	dB(A)
18:00 - 19:00	83.4	dB(A)
19:00 - 20:00	82.2	dB(A)
20:00 - 21:00	81.7	dB(A)
21:00 - 22:00	84.5	dB(A)
22:00 - 23:00	83.8	dB(A)
23:00 - 00:00	8.8	dB(A)
00:00 - 01:00	82.8	dB(A)
01:00 - 02:00	80.2	dB(A)
02:00 - 03:00	80.3	dB(A)
03:00 - 04:00	76.5	dB(A)
04:00 - 05:00	75.8	dB(A)
05:00 - 06:00	75.7	dB(A)
06:00 - 07:00	76.8	dB(A)
07:00 - 08:00	77.0	dB(A)
08:00 - 09:00	76.8	dB(A)
L_{eq} 24 hr.	81.1	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:00 - 17:00 น. = 81 17:00 - 01:00 น. = 82 01:00 - 09:00 น. = 77	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	09:00 - 17:00 น. = 81 17:00 - 01:00 น. = 81 01:00 - 09:00 น. = 77	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

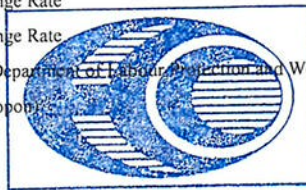
^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009

(Measurement By Ms. Thanatporn Klinsoopon)



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

31/10/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : BK11
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322748 : Class 2

SAMPLE NO. : 47136
MEASURING DATE : 20-21/11/2024
RECEIVED DATE : 22/11/2024
REPORTED DATE : 26/11/2024

TIME \ DATE	20-21/11/2024 (L_{eq})	UNIT
09:05 - 10:05 ^{/3}	83.1	dB(A)
10:05 - 11:05	82.6	dB(A)
11:05 - 12:05	80.7	dB(A)
12:05 - 13:05	84.8	dB(A)
13:05 - 14:05	86.2	dB(A)
14:05 - 15:05	86.2	dB(A)
15:05 - 16:05	86.3	dB(A)
16:05 - 17:05	86.6	dB(A)
17:05 - 18:05	82.9	dB(A)
18:05 - 19:05	82.3	dB(A)
19:05 - 20:05	76.6	dB(A)
20:05 - 21:05	84.9	dB(A)
21:05 - 22:05	86.7	dB(A)
22:05 - 23:05	86.7	dB(A)
23:05 - 00:05	86.4	dB(A)
00:05 - 01:05	86.5	dB(A)
01:05 - 02:05	86.1	dB(A)
02:05 - 03:05	84.8	dB(A)
03:05 - 04:05	79.2	dB(A)
04:05 - 05:05	76.4	dB(A)
05:05 - 06:05	81.0	dB(A)
06:05 - 07:05	82.8	dB(A)
07:05 - 08:05	76.9	dB(A)
08:05 - 09:05	85.2	dB(A)
L_{eq} 24 hr.	84.4	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	09:05 - 17:05 น. = 84 17:05 - 01:05 น. = 85 01:05 - 09:05 น. = 82	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	09:05 - 17:05 น. = 84 17:05 - 01:05 น. = 84 01:05 - 09:05 น. = 82	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Savita Kittinoavarat)



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

26/11/2024

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Request No. LA67-R1262

Report No. R6712-2038

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : BK11
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322745 : Class 2

SAMPLE NO. : 50325
MEASURING DATE : 04-05/12/2024
RECEIVED DATE : 09/12/2024
REPORTED DATE : 17/12/2024

TIME \ DATE	04-05/12/2024 (L_{eq})	UNIT
11:00 - 12:00 ^{/3}	84.3	dB(A)
12:00 - 13:00	85.4	dB(A)
13:00 - 14:00	85.9	dB(A)
14:00 - 15:00	84.6	dB(A)
15:00 - 16:00	86.2	dB(A)
16:00 - 17:00	81.3	dB(A)
17:00 - 18:00	71.9	dB(A)
18:00 - 19:00	71.6	dB(A)
19:00 - 20:00	68.4	dB(A)
20:00 - 21:00	74.6	dB(A)
21:00 - 22:00	75.2	dB(A)
22:00 - 23:00	79.8	dB(A)
23:00 - 00:00	83.7	dB(A)
00:00 - 01:00	84.7	dB(A)
01:00 - 02:00	84.8	dB(A)
02:00 - 03:00	84.4	dB(A)
03:00 - 04:00	80.8	dB(A)
04:00 - 05:00	75.2	dB(A)
05:00 - 06:00	75.9	dB(A)
06:00 - 07:00	82.9	dB(A)
07:00 - 08:00	75.0	dB(A)
08:00 - 09:00	84.8	dB(A)
09:00 - 10:00	83.9	dB(A)
10:00 - 11:00	83.0	dB(A)
L_{eq} 24 hr.	82.5	dB(A)
L_{eq} 8 hr. (TWA) ^{*,/1}	11:00 - 19:00 น. = 83 19:00 - 03:00 น. = 82 03:00 - 11:00 น. = 81	dB(A)
L_{eq} 8 hr. (TWA) ^{**,/2}	11:00 - 19:00 น. = 83 19:00 - 03:00 น. = 81 03:00 - 11:00 น. = 81	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

17/12/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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WITHOUT THE WRITTEN APPROVAL LABORATORY



TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha. Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : PK05
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter :
S/N 00322745 : Class 2

SAMPLE NO. : 30843
MEASURING DATE : 21-22/08/2024
RECEIVED DATE : 22/08/2024
REPORTED DATE : 29/08/2024

TIME \ DATE	21-22/08/2024 (L_{eq})	UNIT
08:50 - 09:50 ^{/3}	85.9	dB(A)
09:50 - 10:50	80.1	dB(A)
10:50 - 11:50	86.9	dB(A)
11:50 - 12:50	85.4	dB(A)
12:50 - 13:50	84.1	dB(A)
13:50 - 14:50	86.8	dB(A)
14:50 - 15:50	85.3	dB(A)
15:50 - 16:50	87.1	dB(A)
16:50 - 17:50	87.2	dB(A)
17:50 - 18:50	87.0	dB(A)
18:50 - 19:50	87.1	dB(A)
19:50 - 20:50	87.2	dB(A)
20:50 - 21:50	86.7	dB(A)
21:50 - 22:50	87.3	dB(A)
22:50 - 23:50	87.4	dB(A)
23:50 - 00:50	86.7	dB(A)
00:50 - 01:50	87.2	dB(A)
01:50 - 02:50	87.1	dB(A)
02:50 - 03:50	85.1	dB(A)
03:50 - 04:50	79.5	dB(A)
04:50 - 05:50	80.7	dB(A)
05:50 - 06:50	86.9	dB(A)
06:50 - 07:50	80.4	dB(A)
07:50 - 08:50	88.5	dB(A)
L_{eq} 24 hr.	86.1	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	08:50 - 16:50 น. = 85 16:50 - 00:50 น. = 87 00:50 - 08:50 น. = 85	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	08:50 - 16:50 น. = 85 16:50 - 00:50 น. = 87 00:50 - 08:50 น. = 85	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} . 90 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

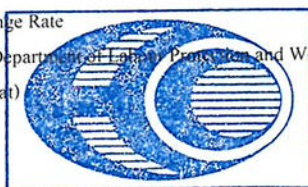
^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{/3} Start Time

* Based on Criteria 85 dB(A): 3 dB Exchange Rate

** Based on Criteria 90 dB(A): 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Savita Kittinoavarat)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....
(MRS. WANPEN LHAOCHINDAWAT)

29/08/2024

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COPY

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : PK07
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter ;
S/N 00322752 : Class 2

SAMPLE NO. : 33376
MEASURING DATE : 12-13/09/2024
RECEIVED DATE : 13/09/2024
REPORTED DATE : 26/09/2024

TIME \ DATE	12-13/09/2024 (L_{eq})	UNIT
09:05 - 10:05 ^{1/3}	86.0	dB(A)
10:05 - 11:05	86.3	dB(A)
11:05 - 12:05	82.7	dB(A)
12:05 - 13:05	84.3	dB(A)
13:05 - 14:05	82.3	dB(A)
14:05 - 15:05	82.2	dB(A)
15:05 - 16:05	81.9	dB(A)
16:05 - 17:05	81.5	dB(A)
17:05 - 18:05	80.7	dB(A)
18:05 - 19:05	81.8	dB(A)
19:05 - 20:05	78.3	dB(A)
20:05 - 21:05	79.0	dB(A)
21:05 - 22:05	81.2	dB(A)
22:05 - 23:05	81.5	dB(A)
23:05 - 00:05	82.2	dB(A)
00:05 - 01:05	82.4	dB(A)
01:05 - 02:05	86.8	dB(A)
02:05 - 03:05	82.1	dB(A)
03:05 - 04:05	84.7	dB(A)
04:05 - 05:05	80.8	dB(A)
05:05 - 06:05	80.7	dB(A)
06:05 - 07:05	84.6	dB(A)
07:05 - 08:05	80.7	dB(A)
08:05 - 09:05	87.1	dB(A)
L_{eq} 24 hr.	83.2	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1/}	09:05 - 17:05 น. = 83 17:05 - 01:05 น. = 81 01:05 - 09:05 น. = 84	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2/}	09:05 - 17:05 น. = 83 17:05 - 01:05 น. = 81 01:05 - 09:05 น. = 83	dB(A)
Standard L_{eq} 8 hr.	85 ^{1/} , 90 ^{2/}	dB(A)

REMARK : ^{1/} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

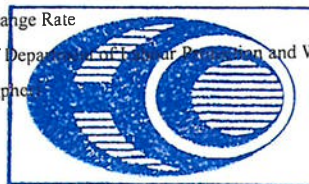
^{2/} Notification of The Ministry of Industry B.E. 2546 (2003)^{3/} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009

(Measurement By Ms. Pornnapa Phongphat)



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Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

26/09/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha. Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : PK07
PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.
DETERMINATION METHOD : ISO 11202:2010
INSTRUMENT : Integrated Sound Level Meter :
S/N 00322744 : Class 2

SAMPLE NO. : 40713
MEASURING DATE : 21-22/10/2024
RECEIVED DATE : 23/10/2024
REPORTED DATE : 11/11/2024

TIME \ DATE	21-22/10/2024 (L_{eq})	UNIT
10:00 - 11:00 ^{/3}	86.5	dB(A)
11:00 - 12:00	81.0	dB(A)
12:00 - 13:00	79.1	dB(A)
13:00 - 14:00	79.9	dB(A)
14:00 - 15:00	84.6	dB(A)
15:00 - 16:00	79.4	dB(A)
16:00 - 17:00	78.1	dB(A)
17:00 - 18:00	77.2	dB(A)
18:00 - 19:00	76.8	dB(A)
19:00 - 20:00	76.9	dB(A)
20:00 - 21:00	77.9	dB(A)
21:00 - 22:00	77.9	dB(A)
22:00 - 23:00	77.4	dB(A)
23:00 - 00:00	77.7	dB(A)
00:00 - 01:00	77.3	dB(A)
01:00 - 02:00	75.9	dB(A)
02:00 - 03:00	75.0	dB(A)
03:00 - 04:00	73.6	dB(A)
04:00 - 05:00	73.9	dB(A)
05:00 - 06:00	75.4	dB(A)
06:00 - 07:00	74.6	dB(A)
07:00 - 08:00	78.2	dB(A)
08:00 - 09:00	80.4	dB(A)
09:00 - 10:00	81.6	dB(A)
L_{eq} 24 hr.	79.5	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	10:00 - 18:00 น. = 81 18:00 - 02:00 น. = 77 02:00 - 10:00 น. = 77	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	10:00 - 18:00 น. = 81 18:00 - 02:00 น. = 77 02:00 - 10:00 น. = 77	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} . 90 ^{/2}	dB(A)

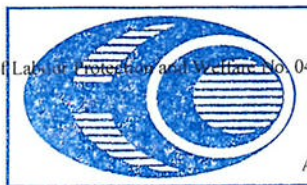
REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)^{/3} Start Time

* Based on Criteria 85 dB(A): 3 dB Exchange Rate

** Based on Criteria 90 dB(A): 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labor Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Jutarat Suksaget)

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. APIRADEE CHUEN-AROM)

11/11/2024

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TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : PK07

PARAMETER*** : L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.

DETERMINATION METHOD : ISO 11202:2010

INSTRUMENT : Integrated Sound Level Meter ;

S/N 00222592 : Class 2

SAMPLE NO. : 47135

MEASURING DATE : 20-21/11/2024

RECEIVED DATE : 22/11/2024

REPORTED DATE : 26/11/2024

TIME \ DATE	20-21/11/2024 (L_{eq})	UNIT
09:10 - 10:10 ^{1/3}	77.8	dB(A)
10:10 - 11:10	77.7	dB(A)
11:10 - 12:10	78.6	dB(A)
12:10 - 13:10	83.3	dB(A)
13:10 - 14:10	80.1	dB(A)
14:10 - 15:10	85.6	dB(A)
15:10 - 16:10	83.5	dB(A)
16:10 - 17:10	83.6	dB(A)
17:10 - 18:10	85.4	dB(A)
18:10 - 19:10	83.1	dB(A)
19:10 - 20:10	84.1	dB(A)
20:10 - 21:10	83.1	dB(A)
21:10 - 22:10	77.7	dB(A)
22:10 - 23:10	77.2	dB(A)
23:10 - 00:10	75.7	dB(A)
00:10 - 01:10	76.2	dB(A)
01:10 - 02:10	75.7	dB(A)
02:10 - 03:10	74.4	dB(A)
03:10 - 04:10	73.8	dB(A)
04:10 - 05:10	73.7	dB(A)
05:10 - 06:10	74.6	dB(A)
06:10 - 07:10	74.3	dB(A)
07:10 - 08:10	76.7	dB(A)
08:10 - 09:10	80.3	dB(A)
L_{eq} 24 hr.	80.7	dB(A)
L_{eq} 8 hr. (TWA) ^{*,1/}	09:10 - 17:10 น. = 82 17:10 - 01:10 น. = 81 01:10 - 09:10 น. = 76	dB(A)
L_{eq} 8 hr. (TWA) ^{**,2/}	09:10 - 17:10 น. = 81 17:10 - 01:10 น. = 81 01:10 - 09:10 น. = 75	dB(A)
Standard L_{eq} 8 hr.	85 ^{1/} , 90 ^{2/}	dB(A)

REMARK : ^{1/} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)

(Published in the Government Gazette on January 26, 2018)

^{2/} Notification of The Ministry of Industry B.E. 2546 (2003)^{3/} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009

(Measurement By Ms. Savita Kittinoavarat)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

26/11/2024

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TEST REPORT

CUSTOMER	: Siam Poongsan Metal Co., Ltd.		
ADDRESS	: 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230		
SAMPLE SOURCE	: Siam Poongsan Metal Co., Ltd.		
SAMPLE POINT	: PK07		
PARAMETER***	: L_{eq} 1 hr., L_{eq} 8 hr. & L_{eq} 24 hr.	SAMPLE NO.	: 50324
DETERMINATION METHOD	: ISO 11202:2010	MEASURING DATE	: 04-05/12/2024
INSTRUMENT	: Integrated Sound Level Meter ;	RECEIVED DATE	: 09/12/2024
	S/N 00222594 : Class 2	REPORTED DATE	: 17/12/2024

TIME \ DATE	04-05/12/2024 (L_{eq})	UNIT
11:10 - 12:10 ^{/3}	81.8	dB(A)
12:10 - 13:10	77.2	dB(A)
13:10 - 14:10	79.5	dB(A)
14:10 - 15:10	83.0	dB(A)
15:10 - 16:10	81.9	dB(A)
16:10 - 17:10	76.7	dB(A)
17:10 - 18:10	73.7	dB(A)
18:10 - 19:10	76.2	dB(A)
19:10 - 20:10	77.6	dB(A)
20:10 - 21:10	75.2	dB(A)
21:10 - 22:10	76.0	dB(A)
22:10 - 23:10	76.3	dB(A)
23:10 - 00:10	80.9	dB(A)
00:10 - 01:10	80.4	dB(A)
01:10 - 02:10	80.5	dB(A)
02:10 - 03:10	80.3	dB(A)
03:10 - 04:10	78.7	dB(A)
04:10 - 05:10	75.1	dB(A)
05:10 - 06:10	78.2	dB(A)
06:10 - 07:10	77.4	dB(A)
07:10 - 08:10	75.7	dB(A)
08:10 - 09:10	75.8	dB(A)
09:10 - 10:10	76.0	dB(A)
10:10 - 11:10	76.0	dB(A)
L_{eq} 24 hr.	78.7	dB(A)
L_{eq} 8 hr. (TWA) ^{*/1}	11:10 - 19:10 น. = 79 19:10 - 03:10 น. = 78 03:10 - 11:10 น. = 76	dB(A)
L_{eq} 8 hr. (TWA) ^{**/2}	11:10 - 19:10 น. = 79 19:10 - 03:10 น. = 78 03:10 - 11:10 น. = 76	dB(A)
Standard L_{eq} 8 hr.	85 ^{/1} , 90 ^{/2}	dB(A)

REMARK : ^{/1} Notification of The Department of Labour Protection and Welfare B.E. 2561 (2018)
(Published in the Government Gazette on January 26, 2018)

^{/2} Notification of The Ministry of Industry B.E. 2546 (2003)

^{/3} Start Time

* Based on Criteria 85 dB(A); 3 dB Exchange Rate

** Based on Criteria 90 dB(A); 5 dB Exchange Rate

*** Parameter have License Registration of Department of Labour Protection and Welfare No. 0403-03-2564-0009
(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์น ไทย คอนซัลติง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAI)

17/12/2024

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Request No. ATR6707030

Report No. 6707-0480

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK01
SAMPLING DATE : 04/07/2024 SAMPLE NO. : A67070480
RECEIVED DATE : 10/07/2024 SAMPLING TIME : 10:36-11:36
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 10/07/2024-15/07/2024
Serial No. 218432 REPORTED DATE : 19/07/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	0.114	1.00	mg/m ³
		0.028	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

19/07/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

19/07/2024

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Request No. ATR6708016

Report No. 6708-0197

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5, T.Tungsukla, A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK01
SAMPLING DATE : 07/08/2024 SAMPLE NO. : A67080197
RECEIVED DATE : 09/08/2024 SAMPLING TIME : 09:15-10:15
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 09/08/2024-10/08/2024
Serial No. 218408 REPORTED DATE : 20/08/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanaporn Klinsopon)

20/08/2024



Approved By

(Mr. Kawee Suthasub)

20/08/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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WITHOUT THE WRITTEN APPROVAL LABORATORY

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Request No. ATR6709019

Report No. 6709-0212

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tung Sukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK01
SAMPLING DATE : 05/09/2024 SAMPLE NO. : A67090212
RECEIVED DATE : 10/09/2024 SAMPLING TIME : 08:55-09:55
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 10/09/2024-10/09/2024
Serial No. 218444 REPORTED DATE : 14/09/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

14/09/2024



Approved By

(Mr. Kawee Suthasub)

14/09/2024

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

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Request No. ATR6711003

Report No. 6711-0036

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK01
SAMPLING DATE : 21/10/2024 SAMPLE NO. : A67110036
RECEIVED DATE : 01/11/2024 SAMPLING TIME : 10:10-11:10
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 01/11/2024-02/11/2024
Serial No. 218402 REPORTED DATE : 05/11/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By



(Mr. Thongchai Boonsak)

05/11/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Kawee Suthasub)

05/11/2024

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COPY

Request No. ATR6711059

Report No. 6711-0962

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5, T.Tungsukla, A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK01
SAMPLING DATE : 21/11/2024 SAMPLE NO. : A67110962
RECEIVED DATE : 26/11/2024 SAMPLING TIME : 09:30-10:30
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 26/11/2024-28/11/2024
Serial No. 218405 REPORTED DATE : 02/12/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By



(Mr. Thongchai Boonsak)

02/12/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Kawee Suthasub)

02/12/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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WITHOUT THE WRITTEN APPROVAL LABORATORY

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Request No. ATR6712036

Report No. 6712-0493

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK01
SAMPLING DATE : 06/12/2024 SAMPLE NO. : A67120493
RECEIVED DATE : 13/12/2024 SAMPLING TIME : 10:06-11:06
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 13/12/2024-13/12/2024
Serial No. 218391 REPORTED DATE : 21/12/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

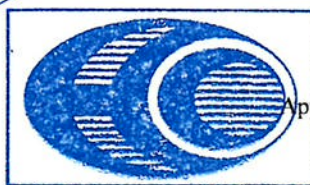
* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Aocha Khwansirimongkon)

Examined By

(Miss Thanatporn Klinsoyon)

21/12/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

21/12/2024

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WITHOUT THE WRITTEN APPROVAL LABORATORY

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Request No. ATR6707041

Report No. 6707-0685

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK03
SAMPLING DATE : 12/07/2024 SAMPLE NO. : A67070685
RECEIVED DATE : 16/07/2024 SAMPLING TIME : 09:05-10:05
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 16/07/2024-18/07/2024
Serial No. 218408 REPORTED DATE : 19/07/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

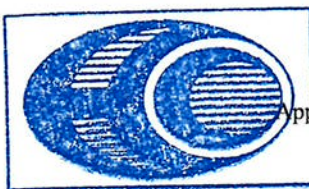
* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsoon)

19/07/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

19/07/2024

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Request No. ATR6709038

Report No. 6709-0738

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5, T.Tungsukla, A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK03
SAMPLING DATE : 14/09/2024 SAMPLE NO. : A67090738
RECEIVED DATE : 20/09/2024 SAMPLING TIME : 10:00-11:00
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 20/09/2024-20/09/2024
Serial No. 218412 REPORTED DATE : 24/09/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

24/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

24/09/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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WITHOUT THE WRITTEN APPROVAL LABORATORY

COPY

Request No. ATR6709038

Report No. 6709-0736

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5, T.Tungsukla, A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK03
SAMPLING DATE : 14/09/2024 SAMPLE NO. : A67090736
RECEIVED DATE : 20/09/2024 SAMPLING TIME : 09:00-10:00
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 20/09/2024-20/09/2024
Serial No. 218432 REPORTED DATE : 24/09/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsoon)

24/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

24/09/2024

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COPY

Request No. ATR6711003

Report No. 6711-0039

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK03
SAMPLING DATE : 21/10/2024 SAMPLE NO. : A67110039
RECEIVED DATE : 01/11/2024 SAMPLING TIME : 10:20-11:20
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 01/11/2024-02/11/2024
Serial No. 218445 REPORTED DATE : 05/11/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

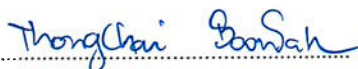
REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

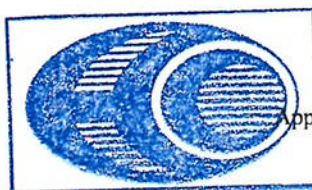
(Sampling By Mr. Suttha Songthaninai)

Examined By



(Mr. Thongchai Boonsak)

05/11/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Kawee Suthasub)

05/11/2024

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WITHOUT THE WRITTEN APPROVAL LABORATORY



Request No. ATR6707041

Report No. 6707-0684

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : PK03
SAMPLING DATE : 12/07/2024 SAMPLE NO. : A67070684
RECEIVED DATE : 16/07/2024 SAMPLING TIME : 09:05-10:05
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 16/07/2024-18/07/2024
Serial No. 218408 REPORTED DATE : 19/07/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Nitric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.026	5	mg/m ³
		< 0.010	2	ppm

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

19/07/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

19/07/2024

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Request No. ATR6709038

Report No. 6709-0739

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5, T.Tungsukla, A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK03
SAMPLING DATE : 14/09/2024 SAMPLE NO. : A67090739
RECEIVED DATE : 20/09/2024 SAMPLING TIME : 10:00-11:00
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 20/09/2024-20/09/2024
Serial No. 218412 REPORTED DATE : 24/09/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹¹	UNIT
Nitric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.026	5	mg/m ³
		< 0.010	2	ppm

REMARK:

¹¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsoon)

24/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

24/09/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Request No. ATR6709038

Report No. 6709-0737

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5, T.Tungsukla, A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK03
SAMPLING DATE : 14/09/2024 SAMPLE NO. : A67090737
RECEIVED DATE : 20/09/2024 SAMPLING TIME : 09:00-10:00
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 20/09/2024-20/09/2024
Serial No. 218432 REPORTED DATE : 24/09/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Nitric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.026	5	mg/m ³
		< 0.010	2	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

24/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

24/09/2024

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Request No. ATR6711003

Report No. 6711-0040

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK03
SAMPLING DATE : 21/10/2024 SAMPLE NO. : A67110040
RECEIVED DATE : 01/11/2024 SAMPLING TIME : 10:20-11:20
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 01/11/2024-02/11/2024
Serial No. 218445 REPORTED DATE : 05/11/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Nitric acid	Ion Chromatography Method (OSHA ID 165sg)	0.059	5	mg/m ³
		0.023	2	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By



(Mr. Thongchai Boonsak)

05/11/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Kawee Suthasub)

05/11/2024

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Request No. ATR6708049

Report No. 6708-0903

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK05
SAMPLING DATE : 21/08/2024 SAMPLE NO. : A67080903
RECEIVED DATE : 27/08/2024 SAMPLING TIME : 08:35-09:35
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 27/08/2024-28/08/2024
Serial No. 20211103029 REPORTED DATE : 29/08/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Nitchaphon Tonglor)

Examined By

(Miss Thanatporn Klinsoon)

29/08/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

29/08/2024

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Request No. ATR6709038

Report No. 6709-0735

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5, T.Tungsukla, A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK07
SAMPLING DATE : 12/09/2024 SAMPLE NO. : A67090735
RECEIVED DATE : 20/09/2024 SAMPLING TIME : 09:00-10:00
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 20/09/2024-20/09/2024
Serial No. 218388 REPORTED DATE : 24/09/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

24/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

24/09/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Request No. ATR6711003

Report No. 6711-0038

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK07
SAMPLING DATE : 21/10/2024 SAMPLE NO. : A67110038
RECEIVED DATE : 01/11/2024 SAMPLING TIME : 10:13-11:13
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 01/11/2024-02/11/2024
Serial No. 218413 REPORTED DATE : 05/11/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

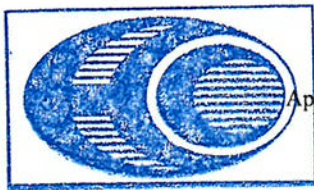
(Sampling By Mr. Suttha Songthaninai)

Examined By



(Mr. Thongchai Boonsak)

05/11/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Kawee Suthasub)

05/11/2024

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

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Request No. ATR6711059

Report No. 6711-0958

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5, T.Tungsukla, A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK07
SAMPLING DATE : 20/11/2024 SAMPLE NO. : A67110958
RECEIVED DATE : 26/11/2024 SAMPLING TIME : 09:00-10:00
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 26/11/2024-28/11/2024
Serial No. 218411 REPORTED DATE : 02/12/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

Thongchai Boonsak

(Mr. Thongchai Boonsak)

02/12/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Kawee Suthasub)

02/12/2024

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

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Request No. ATR6712036

Report No. 6712-0495

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK07
SAMPLING DATE : 06/12/2024 SAMPLE NO. : A67120495
RECEIVED DATE : 13/12/2024 SAMPLING TIME : 10:08-11:08
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 13/12/2024-13/12/2024
Serial No. 218403 REPORTED DATE : 21/12/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

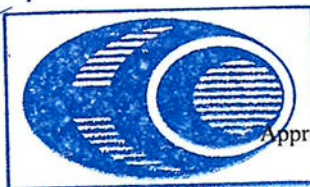
* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Aocha Khwansirimongkon)

Examined By

(Miss Thanatporn Klinsoyon)

21/12/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

21/12/2024

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COPY

Request No. ATR6708016

Report No. 6708-0198

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5, T.Tungsukla, A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : AP02
SAMPLING DATE : 07/08/2024 SAMPLE NO. : A67080198
RECEIVED DATE : 09/08/2024 SAMPLING TIME : 09:16-10:16
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 09/08/2024-10/08/2024
Serial No. 218403 REPORTED DATE : 20/08/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

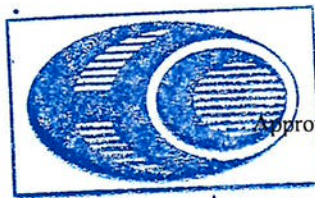
* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsohon)

20/08/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

20/08/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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Request No. ATR6709004

Report No. 6709-0063

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : AP02
SAMPLING DATE : 29/08/2024 SAMPLE NO. : A67090063
RECEIVED DATE : 02/09/2024 SAMPLING TIME : 08:08-09:08
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 02/09/2024-03/09/2024
Serial No. 218411 REPORTED DATE : 04/09/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

04/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

04/09/2024

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Request No. ATR6709019

Report No. 6709-0214

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : AP02
SAMPLING DATE : 05/09/2024 SAMPLE NO. : A67090214
RECEIVED DATE : 10/09/2024 SAMPLING TIME : 08:55-09:55
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 10/09/2024-10/09/2024
Serial No. 218406 REPORTED DATE : 14/09/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and

No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

14/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

14/09/2024

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Request No. ATR6711003

Report No. 6711-0037

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : AP02
SAMPLING DATE : 21/10/2024 SAMPLE NO. : A67110037
RECEIVED DATE : 01/11/2024 SAMPLING TIME : 10:15-11:15
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 01/11/2024-02/11/2024
Serial No. 218408 REPORTED DATE : 05/11/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

Thongchai Boonsak

(Mr. Thongchai Boonsak)

05/11/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Kawee Suthasub)

05/11/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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WITHOUT THE WRITTEN APPROVAL LABORATORY

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Request No. ATR6711059

Report No. 6711-0963

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5, T.Tungsukla, A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : PK02
SAMPLING DATE : 21/11/2024 SAMPLE NO. : A67110963
RECEIVED DATE : 26/11/2024 SAMPLING TIME : 09:33-10:33
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 26/11/2024-28/11/2024
Serial No. 218445 REPORTED DATE : 02/12/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

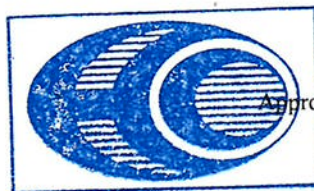
(Sampling By Mr. Suttha Songthaninai)

Examined By



(Mr. Thongchai Boonsak)

02/12/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Kawee Suthasub)

02/12/2024

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WITHOUT THE WRITTEN APPROVAL LABORATORY



Request No. ATR6712036

Report No. 6712-0494

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : AP02
SAMPLING DATE : 06/12/2024 SAMPLE NO. : A67120494
RECEIVED DATE : 13/12/2024 SAMPLING TIME : 10:18-11:18
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 13/12/2024-13/12/2024
Serial No. 218445 REPORTED DATE : 21/12/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

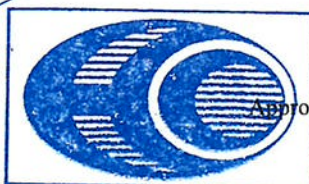
* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Aocha Khwansirimongkon)

Examined By

(Miss Thanatporn Klinsoyon)

21/12/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

21/12/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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WITHOUT THE WRITTEN APPROVAL LABORATORY

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Request No. ATR6707030

Report No. 6707-0483

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : WWT Storage
SAMPLING DATE : 05/07/2024 SAMPLE NO. : A67070483
RECEIVED DATE : 10/07/2024 SAMPLING TIME : 09:50-10:50
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 10/07/2024-15/07/2024
Serial No. 218411 REPORTED DATE : 19/07/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	0.324	1.00	mg/m ³
		0.081	0.25	ppm

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

19/07/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

19/07/2024

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Request No. ATR6708016

Report No. 6708-0196

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5, T.Tungsukla, A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : WWT Storage
SAMPLING DATE : 07/08/2024 SAMPLE NO. : A67080196
RECEIVED DATE : 09/08/2024 SAMPLING TIME : 09:05-10:05
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 09/08/2024-10/08/2024
Serial No. 218444 REPORTED DATE : 20/08/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

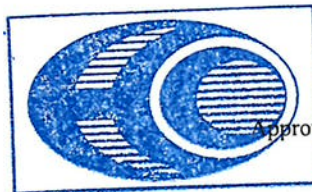
* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

20/08/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

20/08/2024

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Request No. ATR6709019

Report No. 6709-0215

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tung Sukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : WWT Storage
SAMPLING DATE : 05/09/2024 SAMPLE NO. : A67090215
RECEIVED DATE : 10/09/2024 SAMPLING TIME : 09:00-10:00
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 10/09/2024-10/09/2024
Serial No. 218385 REPORTED DATE : 14/09/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	0.109	1.00	mg/m ³
		0.027	0.25	ppm

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and

No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

14/09/2024



Approved By

(Mr. Kawee Suthasub)

14/09/2024

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Request No. ATR6711003

Report No. 6711-0035

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : WWT Storage
SAMPLING DATE : 21/10/2024 SAMPLE NO. : A67110035
RECEIVED DATE : 01/11/2024 SAMPLING TIME : 10:00-11:00
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 01/11/2024-02/11/2024
Serial No. 218405 REPORTED DATE : 05/11/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By



(Mr. Thongchai Boonsak)

05/11/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Kawee Suthasub)

05/11/2024

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Request No. ATR6711059

Report No. 6711-0961

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5, T.Tungsukla, A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : WWT Storage
SAMPLING DATE : 21/11/2024 SAMPLE NO. : A67110961
RECEIVED DATE : 26/11/2024 SAMPLING TIME : 09:25-10:25
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 26/11/2024-28/11/2024
Serial No. 218444 REPORTED DATE : 02/12/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By



(Mr. Thongchai Boonsak)

02/12/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Kawee Suthasub)

02/12/2024

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WITHOUT THE WRITTEN APPROVAL LABORATORY

Request No. ATR6712036

Report No. 6712-0492

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : WWT Storage
SAMPLING DATE : 06/12/2024 SAMPLE NO. : A67120492
RECEIVED DATE : 13/12/2024 SAMPLING TIME : 09:51-10:51
SAMPLING INSTRUMENT : Personal Pump Flow rate 0.20 L/min TESTED DATE : 13/12/2024-13/12/2024
Serial No. 218383 REPORTED DATE : 21/12/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Sulfuric acid	Ion Chromatography Method (OSHA ID 165sg)	< 0.040	1.00	mg/m ³
		< 0.010	0.25	ppm

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

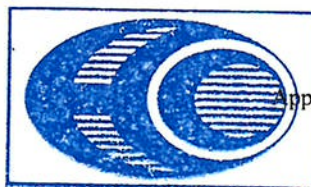
* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and No.0202-03-2564-0005.

(Sampling By Mr. Aocha Khwansirimongkon)

Examined By

(Miss Thanatporn Klinsopon)

21/12/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

21/12/2024

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THIS REPORT SHALL NOT REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL LABORATORY

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Request No. ATR6707030

Report No. 6707-0484

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : Casting Area
SAMPLING DATE : 05/07/2024 SAMPLE NO. : A67070484
RECEIVED DATE : 10/07/2024 SAMPLING TIME : 09:25-10:25
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 10/07/2024-18/07/2024
Serial No. 20200403065 REPORTED DATE : 19/07/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.287	5	mg/m ³

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.
(Standard for Zinc oxide fume)

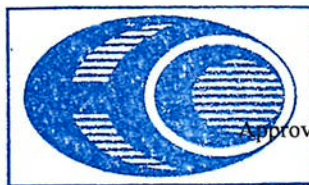
* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

19/07/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

19/07/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY
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WITHOUT THE WRITTEN APPROVAL LABORATORY

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Request No. ATR6708016

Report No. 6708-0200

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5, T.Tungsukla, A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : Casting Area
SAMPLING DATE : 07/08/2024 SAMPLE NO. : A67080200
RECEIVED DATE : 09/08/2024 SAMPLING TIME : 10:08-11:08
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 09/08/2024-20/08/2024
Serial No. 20211102103 REPORTED DATE : 20/08/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.060	5	mg/m ³

REMARK:^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

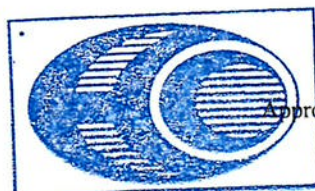
(Sampling By Mr. Suttha Songthaninai)

Examined By



(Miss Thanatporn Klinsohon)

20/08/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Kawee Suthasub)

20/08/2024

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

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Request No. ATR6709019

Report No. 6709-0217

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : Casting Area
SAMPLING DATE : 05/09/2024 SAMPLE NO. : A67090217
RECEIVED DATE : 10/09/2024 SAMPLING TIME : 09:25-11:25
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 10/09/2024-13/09/2024
Serial No. 20200403073 REPORTED DATE : 14/09/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.113	5	mg/m ³

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.
(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.
(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

14/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

14/09/2024

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Request No. ATR6711003

Report No. 6711-0042

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : Casting Area
SAMPLING DATE : 21/10/2024 SAMPLE NO. : A67110042
RECEIVED DATE : 01/11/2024 SAMPLING TIME : 10:35-11:35
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 01/11/2024-01/11/2024
Serial No. 20181001044 REPORTED DATE : 05/11/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.031	5	mg/m ³

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.
(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

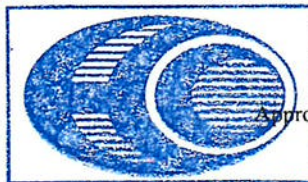
(Sampling By Mr. Suttha Songthaninai)

Examined By



(Mr. Thongchai Boonsak)

05/11/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Kawee Suthasub)

05/11/2024

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Request No. ATR6711059

Report No. 6711-0960

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5, T.Tungsukla, A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : Casting Area
SAMPLING DATE : 21/11/2024 SAMPLE NO. : A67110960
RECEIVED DATE : 26/11/2024 SAMPLING TIME : 09:18-10:18
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 26/11/2024-30/11/2024
Serial No. 20180903078 REPORTED DATE : 02/12/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{1/}	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	< 0.004	5	mg/m ³

REMARK:

^{1/} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.
(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.
(Sampling By Mr. Suttha Songthaninai)

Examined By



(Mr. Thongchai Boonsak)

02/12/2024



Approved By



(Mr. Kawee Suthasub)

02/12/2024

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Request No. ATR6712036

Report No. 6712-0491

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : Casting Area
SAMPLING DATE : 06/12/2024 SAMPLE NO. : A67120491
RECEIVED DATE : 13/12/2024 SAMPLING TIME : 09:29-10:29
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 13/12/2024-20/12/2024
Serial No. 20200403072 REPORTED DATE : 21/12/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.026	5	mg/m ³

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concetration Limits of Hazardous Chemicals.
(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.
(Sampling By Mr. Aocha Khwansirimongkon)

Examined By

(Miss Thanatporn Klinsoyon)

21/12/2024



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Approved By

(Mr. Kawee Suthasub)

21/12/2024

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Request No. ATR6707030

Report No. 6707-0482

TEST REPORT

CUSTOMER : Siam Poongsan metal CO.,LTD.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,LTD.
SAMPLE NAME : Melting Area
SAMPLING DATE : 04/07/2024 SAMPLE NO. : A67070482
RECEIVED DATE : 10/07/2024 SAMPLING TIME : 09:52-10:52
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 10/07/2024-18/07/2024
Serial No. 20200403065 REPORTED DATE : 19/07/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.140	5	mg/m ³

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.
(Standard for Zinc oxide fume)

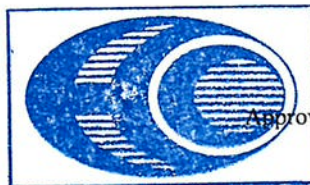
* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

19/07/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

19/07/2024

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Request No. ATR6708016

Report No. 6708-0199

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5, T.Tungsukla, A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : Melting Area
SAMPLING DATE : 07/08/2024 SAMPLE NO. : A67080199
RECEIVED DATE : 09/08/2024 SAMPLING TIME : 10:05-11:05
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 09/08/2024-20/08/2024
Serial No. 20180903082 REPORTED DATE : 20/08/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.043	5	mg/m ³

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.
(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.
(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsohon)

20/08/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

20/08/2024

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Request No. ATR6709019

Report No. 6709-0216

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : Melting Area
SAMPLING DATE : 05/09/2024 SAMPLE NO. : A67090216
RECEIVED DATE : 10/09/2024 SAMPLING TIME : 09:20-11:20
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 10/09/2024-13/09/2024
Serial No. 20200403071 REPORTED DATE : 14/09/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.124	5	mg/m ³

REMARK:

¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.
(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.
(Sampling By Mr. Suttha Songthaninai)

Examined By

(Miss Thanatporn Klinsopon)

14/09/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

14/09/2024

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Request No. ATR6711003

Report No. 6711-0041

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,LTD.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : Melting Area
SAMPLING DATE : 21/10/2024 SAMPLE NO. : A67110041
RECEIVED DATE : 01/11/2024 SAMPLING TIME : 10:30-11:30
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 01/11/2024-00/00/0000
Serial No. 20211102097 REPORTED DATE : 05/11/2024

PARAMETER*	TEST METHOD	RESULT	STD ^{/1}	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.009	5	mg/m ³

REMARK:

^{/1} Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.
(Standard for Zinc oxide fume)

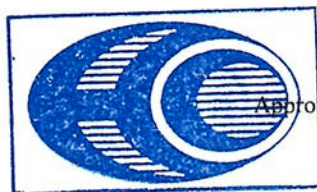
* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Suttha Songthaninai)

Examined By Thongchai Boonsak

(Mr. Thongchai Boonsak)

05/11/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By [Signature]

(Mr. Kawee Suthasub)

05/11/2024

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Request No. ATR6711059

Report No. 6711-0959

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5, T.Tungsukla, A.Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : Melting Area
SAMPLING DATE : 21/11/2024 SAMPLE NO. : A67110959
RECEIVED DATE : 26/11/2024 SAMPLING TIME : 09:15-10:15
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 26/11/2024-30/11/2024
Serial No. 20200403064 REPORTED DATE : 02/12/2024

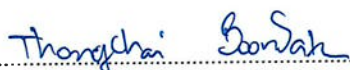
PARAMETER*	TEST METHOD	RESULT	STD ¹¹	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.071	5	mg/m ³

REMARK:

¹¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.
(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.
(Sampling By Mr. Suttha Songthaninai)

Examined By



(Mr. Thongchai Boonsak)

02/12/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By



(Mr. Kawee Suthasub)

02/12/2024

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Request No. ATR6712036

Report No. 6712-0490

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co.,Ltd.
ADDRESS : 38/14 Moo 5 T.Tungsukla A.Sriracha,Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co.,Ltd.
SAMPLE NAME : Melting Area
SAMPLING DATE : 06/12/2024 SAMPLE NO. : A67120490
RECEIVED DATE : 13/12/2024 SAMPLING TIME : 09:14-10:14
SAMPLING INSTRUMENT : Personal Pump Flow rate 2.00 L/min TESTED DATE : 13/12/2024-20/12/2024
Serial No. 20150302003 REPORTED DATE : 21/12/2024

PARAMETER*	TEST METHOD	RESULT	STD ¹	UNIT
Zinc Oxide (ZnO)	Filtration, ICP-OES /NIOSH 7300	0.104	5	mg/m ³

REMARK:¹ Notification of The Department of Labour Protection and Welfare B.E.2560 (2017), Concentration Limits of Hazardous Chemicals.

(Standard for Zinc oxide fume)

* Parameter have License Registration of Department of Labour Protection and Welfare No.0201-03-2564-0008 and
No.0202-03-2564-0005.

(Sampling By Mr. Aocha Khwansirimongkon)

Examined By

(Miss Thanatporn Klinsopon)

21/12/2024



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By

(Mr. Kawee Suthasub)

21/12/2024

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Request No. LA67-R0737

Report No. R6707-1391 - R6707-1393

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : Melting SAMPLE NO. : 22684-22686
 MEASURING DATE : 04/07/2024 RECEIVED DATE : 06/07/2024
 SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 11/07/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080013, TPI050069, TEU080011

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Melting) (หน้าเตาหลอม)	09:00 - 11:00	29.7	29.4	29.1	29.3	29.4
Heat Stress (Melting) (พื้นที่ทำงานทั่วไป)	09:00 - 11:00	28.6	28.7	29.2	29.2	28.9
Heat Stress (Melting) (ห้องพักพนักงาน)	09:00 - 11:00	21.0	21.0	21.2	21.0	21.0
WBGT AVERAGE	09:00 - 11:00	-	-	-	-	25.1
STANDARD		-	-	-	-	32.0 ^{/1,2}

REMARK :

Work Load = 209.61 Kcal/hr.

^{/1} Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)^{/2} Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

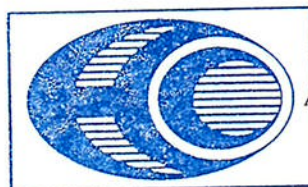
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

11/07/2024

COPY

Request No. LA67-R0821

Report No. R6708-3936 - R6708-3938

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungskula A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : Melting SAMPLE NO. : 29316-29318

MEASURING DATE : 07/08/2024 RECEIVED DATE : 08/08/2024

SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 20/08/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080012, TEU080011, TEU080015

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Melting) (หน้าเตาหลอม)	09:40 - 11:40	31.4	31.4	31.0	31.3	31.3
Heat Stress (Melting) (พื้นที่ทำงานทั่วไป)	09:40 - 11:40	30.5	30.7	30.6	30.8	30.6
Heat Stress (Melting) (ห้องพักพนักงาน)	09:40 - 11:40	23.2	22.6	22.3	22.7	22.7
WBGT AVERAGE	09:40 - 11:40	-	-	-	-	26.9
STANDARD		-	-	-	-	32.0 ^{1/2}

REMARK :

Work Load = 209.61 Kcal/hr.

^{1/1} Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)^{1/2} Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

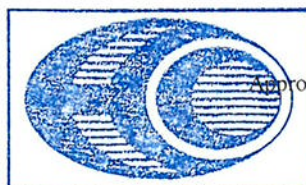
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Jutarat Suksaget)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

20/08/2024

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Request No. LA67-R0922

Report No. R6709-1212 - R6709-1214

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : Melting

SAMPLE NO. : 32418-32420

MEASURING DATE : 05/09/2024

RECEIVED DATE : 07/09/2024

SAMPLING INSTRUMENT : Heat Stress ;

REPORTED DATE : 13/09/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080014, TPQ030023, TEU080013

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Melting) (หน้าเตาหลอม)	09:00 - 11:00	30.7	32.5	31.0	31.1	31.3
Heat Stress (Melting) (พื้นที่ทำงานทั่วไป)	09:00 - 11:00	29.9	29.4	29.8	29.7	29.7
Heat Stress (Melting) (ห้องพักพนักงาน)	09:00 - 11:00	21.9	22.4	20.8	21.6	21.7
WBGT AVERAGE	09:00 - 11:00	-	-	-	-	26.2
STANDARD		-	-	-	-	32.0 ^{1/,2}

REMARK :

Work Load = 209.61 Kcal/hr.

^{1/} Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)^{2/} Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

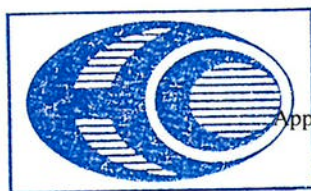
NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009
(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

13/09/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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Request No. LA67-R1109

Report No. R6711-0119 - R6711-0121

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Melting
MEASURING DATE : 21/10/2024
SAMPLING INSTRUMENT : Heat Stress ;

SAMPLE NO. : 40707-40709
RECEIVED DATE : 23/10/2024
REPORTED DATE : 11/11/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TPQ030023, TEU080014, TEU080012

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Melting) (หน้าเตาหลอม)	11:00 - 13:00	31.4	31.4	31.0	31.3	31.3
Heat Stress (Melting) (พื้นที่ทำงานทั่วไป)	11:00 - 13:00	30.5	30.7	30.6	30.8	30.6
Heat Stress (Melting) (ห้องพักพนักงาน)	11:00 - 13:00	22.5	22.6	22.7	22.5	22.6
WBGT AVERAGE	11:00 - 13:00	-	-	-	-	26.8
STANDARD		-	-	-	-	32.0 ^{1/2}

REMARK :

Work Load = 209.61 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)² Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

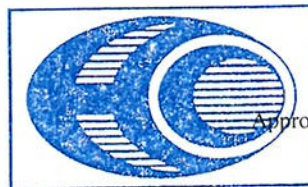
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Jutarat Suksaget)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. APIRADEE CHUEN-AROM)

11/11/2024

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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COPY

Request No. LA67-R11188

Report No. R6711-6223 - R6711-6225

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : Melting SAMPLE NO. : 47124-47126
 MEASURING DATE : 20/11/2024 RECEIVED DATE : 22/11/2024
 SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 26/11/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TPL060039, TPL060040, 22004318

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Melting) (หน้าเตาหลอม)	09:30 - 11:30	27.1	28.5	29.2	29.3	28.5
Heat Stress (Melting) (พื้นที่ทำงานทั่วไป)	09:30 - 11:30	28.2	28.3	28.2	28.2	28.2
Heat Stress (Melting) (ห้องพักพนักงาน)	09:30 - 11:30	24.2	24.2	24.1	24.3	24.2
WBGT AVERAGE	09:30 - 11:30	-	-	-	-	26.3
STANDARD		-	-	-	-	32.0 ^{1/2}

REMARK :

Work Load = 209.61 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)² Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

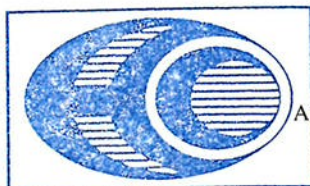
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Savita Kittinoavarat)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

26/11/2024

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Request No. LA67-R1262

Report No. R6712-2017 - R6712-2019

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tung Sukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : Melting SAMPLE NO. : 50304-50306
 MEASURING DATE : 06/12/2024 RECEIVED DATE : 09/12/2024
 SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 17/12/2024
 Wet Bulb Globe Temperature (WBGT) : Serial No. 22004320, TEU080011, TEU080015

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Melting) (หน้าเตาหลอม)	09:00 - 11:00	27.0	27.2	27.3	27.7	27.3
Heat Stress (Melting) (พื้นที่ทำงานทั่วไป)	09:00 - 11:00	27.0	26.9	27.2	27.3	27.1
Heat Stress (Melting) (ห้องพักพนักงาน)	09:00 - 11:00	20.7	19.9	19.6	19.9	20.0
WBGT AVERAGE	09:00 - 11:00	-	-	-	-	23.6
STANDARD		-	-	-	-	32.0 ^{1/2}

REMARK :

Work Load = 209.61 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)² Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009
 (Measurement By Ms. Onanong Leewongsak)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

17/12/2024

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Request No. LA67-R0737

Report No. R6707-1397 - R6707-1399

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : Casting SAMPLE NO. : 22690-22692

MEASURING DATE : 05/07/2024 RECEIVED DATE : 06/07/2024

SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 11/07/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080015, TEU080011, TEU080013

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Casting) (หน้าเตาหลอม)	09:30 - 11:30	28.8	29.5	30.2	30.1	29.6
Heat Stress (Casting) (พื้นที่ทำงานทั่วไป)	09:30 - 11:30	27.3	27.2	27.5	28.2	27.6
Heat Stress (Casting) (ห้องพักพนักงาน)	09:30 - 11:30	23.4	23.8	24.2	25.3	24.2
WBGT AVERAGE	09:30 - 11:30	-	-	-	-	26.6
STANDARD		-	-	-	-	32.0 ^{/1,/2}

REMARK :

Work Load = 203.25 Kcal/hr.

^{/1} Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)^{/2} Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

11/07/2024

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Request No. LA67-R0821

Report No. R6708-3939 - R6708-3941

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : Casting SAMPLE NO. : 29319-29321
 MEASURING DATE : 07/08/2024 RECEIVED DATE : 08/08/2024
 SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 20/08/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TPQ030024, TEU080013, TEU080014

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Casting) (หน้าเตาหลอม)	09:45 - 11:45	30.2	30.2	30.0	29.9	30.1
Heat Stress (Casting) (พื้นที่ทำงานทั่วไป)	09:45 - 11:45	29.3	29.9	29.6	30.5	29.8
Heat Stress (Casting) (ห้องพักพนักงาน)	09:45 - 11:45	22.5	22.6	22.7	22.5	22.6
WBGT AVERAGE	09:45 - 11:45	-	-	-	-	26.3
STANDARD		-	-	-	-	32.0 ^{1/2}

REMARK :

Work Load = 203.25 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)² Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

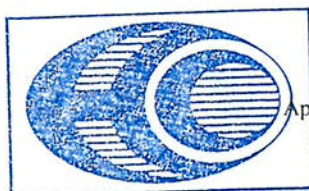
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Jutarat Suksaget)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

20/08/2024

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Request No. LA67-R0922

Report No. R6709-1215 - R6709-1217

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : Casting

SAMPLE NO. : 32421-32423

MEASURING DATE : 05/09/2024

RECEIVED DATE : 07/09/2024

SAMPLING INSTRUMENT : Heat Stress ;

REPORTED DATE : 13/09/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080012, TEU080014, TEU080013

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Casting) (หน้าเตาหลอม)	13:00 - 15:00	29.2	29.7	29.8	30.0	29.7
Heat Stress (Casting) (พื้นที่ทำงานทั่วไป)	13:00 - 15:00	28.3	28.7	28.4	29.2	28.7
Heat Stress (Casting) (ห้องพักพนักงาน)	13:00 - 15:00	22.4	22.2	21.2	21.6	21.8
WBGT AVERAGE	13:00 - 15:00	-	-	-	-	25.6
STANDARD		-	-	-	-	32.0 ^{1/,2}

REMARK :

Work Load = 203.25 Kcal/hr.

^{1/} Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)^{2/} Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

13/09/2024

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Request No. LA67-R1109

Report No. R6711-0122 - R6711-0124

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : Casting SAMPLE NO. : 40710-40712
 MEASURING DATE : 21/10/2024 RECEIVED DATE : 23/10/2024
 SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 11/11/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080015, TEU080011, TEU080013

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Casting) (หน้าเตาหลอม)	11:00 - 13:00	29.6	29.5	29.6	29.6	29.6
Heat Stress (Casting) (พื้นที่ทำงานทั่วไป)	11:00 - 13:00	27.9	28.0	28.0	28.0	28.0
Heat Stress (Casting) (ห้องพักพนักงาน)	11:00 - 13:00	21.8	21.6	21.8	21.7	21.7
WBGT AVERAGE	11:00 - 13:00	-	-	-	-	25.4
STANDARD		-	-	-	-	32.0 ^{11/2}

REMARK :

Work Load = 203.25 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)² Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

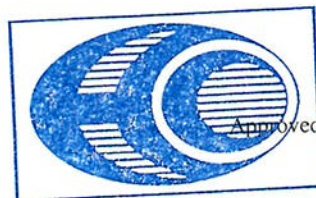
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Jutarat Suksaget)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MS. APIRADEE CHUEN-AROM)

11/11/2024

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Request No. LA67-R11188

Report No. R6711-6220 - R6711-6222

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : Casting SAMPLE NO. : 47121-47123
MEASURING DATE : 20/11/2024 RECEIVED DATE : 22/11/2024
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 26/11/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080013, 22004319, TEU080012

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Casting) (หน้าเตาหลอม)	09:30 - 11:30	29.0	28.8	28.9	28.7	28.8
Heat Stress (Casting) (พื้นที่ทำงานทั่วไป)	09:30 - 11:30	26.4	26.7	26.8	27.1	26.7
Heat Stress (Casting) (ห้องพักพนักงาน)	09:30 - 11:30	24.6	24.6	24.4	24.5	24.5
WBGT AVERAGE	09:30 - 11:30	-	-	-	-	26.3
STANDARD		-	-	-	-	32.0 ^{/1,2}

REMARK :

Work Load = 203.25 Kcal/hr.

^{/1} Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)^{/2} Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

NWB = Natural Wet - Bulb Temperature

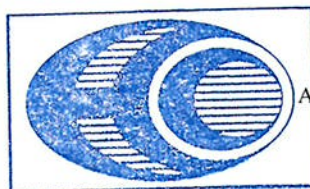
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Savita Kittinoavarat)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

26/11/2024

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Request No. LA67-R1262

Report No. R6712-2020 - R6712-2022

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : Casting SAMPLE NO. : 50307-50309
 MEASURING DATE : 06/12/2024 RECEIVED DATE : 09/12/2024
 SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 17/12/2024
 Wet Bulb Globe Temperature (WBGT) : Serial No. 22004316, TEU080014, TEU080012

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress (Casting) (หน้าเตาหลอม)	09:00 - 11:00	26.6	27.1	26.9	27.3	27.0
Heat Stress (Casting) (พื้นที่ทำงานทั่วไป)	09:00 - 11:00	27.3	27.6	27.8	28.3	27.8
Heat Stress (Casting) (ห้องพักพนักงาน)	09:00 - 11:00	23.7	20.4	20.4	21.3	21.5
WBGT AVERAGE	09:00 - 11:00	-	-	-	-	24.3
STANDARD		-	-	-	-	32.0 ^{1/2}

REMARK :

Work Load = 203.25 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Moderate)² Notification of The Ministry of Industry B.E. 2546 (2003) (Moderate)

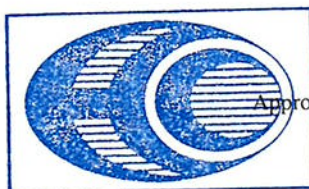
NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009
 (Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

17/12/2024

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Request No. LA67-R0737

Report No. R6707-1394 - R6707-1396

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : เตารีดขนาด (Hot Rolling) SAMPLE NO. : 22687-22689
 MEASURING DATE : 04/07/2024 RECEIVED DATE : 06/07/2024
 SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 11/07/2024
 Wet Bulb Globe Temperature (WBGT) : Serial No. 22004319, 22004318, 22004320

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	09:00 - 11:00	22.4	22.6	22.3	22.4	22.4
เตารีดขนาด (Hot Rolling) (Control Room)						
Heat Stress	09:00 - 11:00	30.2	29.9	29.8	30.2	30.0
เตารีดขนาด (Hot Rolling) พื้นที่วางแท่ง Slab						
Heat Stress	09:00 - 11:00	29.1	28.7	28.7	29.5	29.0
เตารีดขนาด (Hot Rolling) (จุดวางชิ้นงาน, พื้นที่หน้าเตาอบแท่ง Slab)						
WBGT AVERAGE	09:00 - 11:00	-	-	-	-	26.3
STANDARD		-	-	-	-	34.0 ^{1/2}

REMARK :

Work Load = 132.60 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)² Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

NWB = Natural Wet - Bulb Temperature

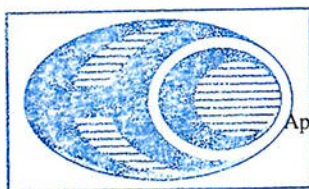
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

11/07/2024

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Request No. LA67-R0815

Report No. R6708-3809 - R6708-3811

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : เตารีดขนาด (Hot Rolling) SAMPLE NO. : 29189-29191

MEASURING DATE : 03/08/2024 RECEIVED DATE : 04/08/2024

SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 08/08/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080014, TEU080013, TEU080011

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	09:00 - 11:00	23.1	24.1	23.2	23.4	23.5
เตารีดขนาด (Hot Rolling) (Control Room)						
Heat Stress	09:00 - 11:00	30.1	30.4	30.9	30.7	30.5
เตารีดขนาด (Hot Rolling) พื้นที่วางแท่ง Slab						
Heat Stress	09:00 - 11:00	30.5	30.7	30.7	30.5	30.6
เตารีดขนาด (Hot Rolling) (จุดวางชิ้นงาน, พื้นที่หน้าเตาอบแท่ง Slab)						
WBGT AVERAGE	09:00 - 11:00	-	-	-	-	27.3
STANDARD		-	-	-	-	34.0 ^{/1,2}

REMARK :

Work Load = 132.60 Kcal/hr.

^{/1} Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)^{/2} Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

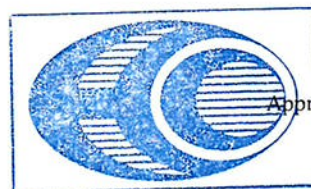
NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009
(Measurement By Ms. Savita Kittinoavarat)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

08/08/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

REPORTED TEST REFER TO SUBMITTED SAMPLES ONLY

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COPY

Request No. LA67-R0922

Report No. R6709-1218 - R6709-1220

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : เตารีดขนาด (Hot Rolling) SAMPLE NO. : 32424-32426
 MEASURING DATE : 05/09/2024 RECEIVED DATE : 07/09/2024
 SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 13/09/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TPL060039, TPL060040, TEU080012

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	09:00 - 11:00	21.2	22.0	21.4	21.9	21.6
เตารีดขนาด (Hot Rolling) (Control Room)						
Heat Stress	09:00 - 11:00	29.6	29.6	29.7	29.8	29.7
เตารีดขนาด (Hot Rolling) พื้นที่วางแท่ง Slab						
Heat Stress	09:00 - 11:00	29.5	29.8	29.1	29.5	29.5
เตารีดขนาด (Hot Rolling) (จุดวางชิ้นงาน, พื้นที่หน้าเตาอบแท่ง Slab)						
WBGT AVERAGE	09:00 - 11:00	-	-	-	-	26.9
STANDARD		-	-	-	-	34.0 ^{1/2}

REMARK :

Work Load = 132.60 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)² Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

13/09/2024

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Request No. LA67-R11188

Report No. R6711-6226 - R6711-6228

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.

ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230

SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.

SAMPLE POINT : เตารีดขนาด (Hot Rolling) SAMPLE NO. : 47127-47129

MEASURING DATE : 20/11/2024 RECEIVED DATE : 22/11/2024

SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 26/11/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080011, TEU080014, TEU080015

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	09:30 - 11:30	21.8	21.7	21.8	21.9	21.8
เตารีดขนาด (Hot Rolling) (Control Room)						
Heat Stress	09:30 - 11:30	28.8	29.5	26.5	26.9	27.9
เตารีดขนาด (Hot Rolling) พื้นที่วางแท่ง Slab						
Heat Stress	09:30 - 11:30	30.1	30.8	30.9	30.7	30.6
เตารีดขนาด (Hot Rolling) (จุดวางชิ้นงาน, พื้นที่หน้าเตาอบแท่ง Slab)						
WBGT AVERAGE	09:30 - 11:30	-	-	-	-	27.2
STANDARD		-	-	-	-	34.0 ^{/1,2}

REMARK :

Work Load = 132.60 Kcal/hr.

^{/1} Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)^{/2} Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

NWB = Natural Wet - Bulb Temperature

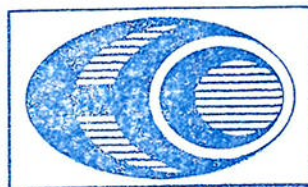
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Savita Kittinoavarat)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

26/11/2024

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Request No. LA67-R1262

Report No. R6712-2023 - R6712-2025

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
 ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
 SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
 SAMPLE POINT : เตารีดขนาด (Hot Rolling) SAMPLE NO. : 50310-50312
 MEASURING DATE : 07/12/2024 RECEIVED DATE : 09/12/2024
 SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 17/12/2024
 Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080012, TEU080015, TEU080011

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	09:00 - 11:00	23.4	23.1	23.9	23.2	23.4
เตารีดขนาด (Hot Rolling) (Control Room)						
Heat Stress	09:00 - 11:00	29.0	28.8	28.9	29.3	29.0
เตารีดขนาด (Hot Rolling) พื้นที่วางแท่ง Slab						
Heat Stress	09:00 - 11:00	29.4	30.9	30.3	29.9	30.1
เตารีดขนาด (Hot Rolling) (จุดวางชิ้นงาน, พื้นที่หน้าเตาอบแท่ง Slab)						
WBGT AVERAGE	09:00 - 11:00	-	-	-	-	27.7
STANDARD		-	-	-	-	34.0 ^{1,2}

REMARK :

Work Load = 132.60 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)² Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

NWB = Natural Wet - Bulb Temperature

GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Onanong Leewongsak)



Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

17/12/2024

บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

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Request No. LA67-R1262

Report No. R6712-2026 - R6712-2028

TEST REPORT

CUSTOMER : Siam Poongsan Metal Co., Ltd.
ADDRESS : 38/14 Moo 5 T. Tungsukla A. Sriracha, Chonburi 20230
SAMPLE SOURCE : Siam Poongsan Metal Co., Ltd.
SAMPLE POINT : เตารีดขนาด (Hot Rolling) SAMPLE NO. : 50313-50315
MEASURING DATE : 07/12/2024 RECEIVED DATE : 09/12/2024
SAMPLING INSTRUMENT : Heat Stress ; REPORTED DATE : 17/12/2024

Wet Bulb Globe Temperature (WBGT) : Serial No. TEU080012, TEU080015, TEU080011

PARAMETER*	Sampling Time	WBGT (°C)				Average (°C)
		30 min	60 min	90 min	120 min	
Heat Stress	13:00 - 15:00	24.0	24.2	24.4	24.4	24.2
เตารีดขนาด (Hot Rolling) (Control Room)						
Heat Stress	13:00 - 15:00	31.6	31.1	31.3	31.4	31.3
เตารีดขนาด (Hot Rolling) พื้นที่วางแท่ง Slab						
Heat Stress	13:00 - 15:00	30.9	30.7	30.2	30.1	30.5
เตารีดขนาด (Hot Rolling) (จุดวางชิ้นงาน, พื้นที่หน้าเตาอบแท่ง Slab)						
WBGT AVERAGE	13:00 - 15:00	-	-	-	-	28.5
STANDARD		-	-	-	-	34.0 ^{1/2}

REMARK :

Work Load = 132.60 Kcal/hr.

¹ Regulation of The Ministry of Labour B.E. 2559 (2016) (Light)² Notification of The Ministry of Industry B.E. 2546 (2003) (Light)

NWB = Natural Wet - Bulb Temperature

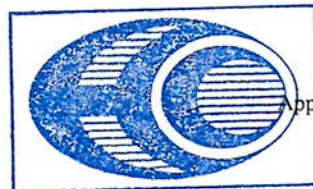
GT = Globe Temperature

DB = Dry - Bulb Temperature

WBGT = Wet - Bulb Globe Temperature

* Parameter have License Registration of Department of Labour Protection and Welfare No. 0401-03-2564-0009

(Measurement By Ms. Onanong Leewongsak)



บริษัท อีสเทิร์นไทยคอนซัลติ้ง 1992 จำกัด

Approved By.....

(MRS. WANPEN LHAOCHINDAWAT)

17/12/2024

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ภาคผนวกที่ 2

เอกสารชี้แจงทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

ที่ อก ๐๓๒๐/๑๑๓๔๒



กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๔๐๐

๒๗ กรกฎาคม ๒๕๖๖

เรื่อง ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

เรียน กรรมการผู้จัดการ บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด

อ้างถึง คำขอต่ออายุของห้องปฏิบัติการวิเคราะห์เอกชน ลงวันที่ ๗ มิถุนายน ๒๕๖๖

สิ่งที่ส่งมาด้วย เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

๑. รายชื่อผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๔๐ ราย
๒. รายชื่อเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๒๕ ราย
๓. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๒๙๒ รายการ จำนวน ๑๙ แผ่น

ตามหนังสือที่อ้างถึง บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด ขอต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน เลขทะเบียน ว-๐๐๓ สถานที่ตั้งเลขที่ ๖๘๓ หมู่ที่ ๑๑ ถนนสุขุมวิท ๘ ตำบลหนองขาม อำเภอสรีราชา จังหวัดชลบุรี ต่อกรมโรงงานอุตสาหกรรม นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว ให้บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด ต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน โดยมีองค์ประกอบดังนี้

- ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๔๐ ราย ตามสิ่งที่ส่งมาด้วย ๑
- ข. เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๒๕ ราย ตามสิ่งที่ส่งมาด้วย ๒
- ค. ขอบข่ายสารมลพิษที่ได้รับขึ้นทะเบียนให้วิเคราะห์ในน้ำเสีย จำนวน ๔๗ รายการ อากาศเสีย (ปล่องระบาย) จำนวน ๒๑ รายการ น้ำใต้ดิน จำนวน ๑๑๑ รายการ สิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว จำนวน ๑๘ รายการ และดิน จำนวน ๙๕ รายการ รวมทั้งสิ้นจำนวน ๒๙๒ รายการ ตามสิ่งที่ส่งมาด้วย ๓

หนังสือฉบับนี้จะหมดอายุในวันที่ ๕ กรกฎาคม ๒๕๖๙ หากประสงค์จะต่ออายุหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ให้ยื่นคำขอต่ออายุพร้อมเอกสารประกอบคำขอต่อกรมโรงงานอุตสาหกรรม ภายใน ๓๐ วัน ก่อนวันสิ้นอายุของหนังสือรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน ทั้งนี้ สามารถยื่นคำขอผ่านระบบอิเล็กทรอนิกส์ได้ที่หน้าเว็บไซต์กรมโรงงานอุตสาหกรรม

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ

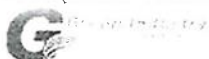
(นายทวี อำพาพันธ์)

ผู้อำนวยการศูนย์วิจัยและเตือนภัยมลพิษโรงงานภาคตะวันออก
ปฏิบัติราชการแทนอธิบดีกรมโรงงานอุตสาหกรรม

ศูนย์วิจัยและเตือนภัยมลพิษโรงงานภาคตะวันออก

โทร. ๐ ๓๓๑๓ ๖๐๕๕ ต่อ ๕๐๐๑-๒

ไปรษณีย์อิเล็กทรอนิกส์ eirw@diw.mail.go.th



“อุตสาหกรรมก้าวไกล ประเทศไทยก้าวหน้า ร่วมกันพัฒนา อุตสาหกรรมสีเขียว”

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เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท อีสเทิร์น ไทย คอนซัลตติ้ง ๑๙๙๒ จำกัด เลขทะเบียน ว-๐๐๓

ที่ อก ๐๓๒๐/๑๑๓๔๒

ลงวันที่ ๒๗ กรกฎาคม ๒๕๖๖

ก. ผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๔๐ ราย

๑) นางสาวมาลีเกษ เลขะวัจกุล	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๑
๒) นายวัฒนา โคตรหล้า	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๒
๓) นางวรรณเพ็ญ เหลาจินดาวัฒน์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๓
๔) นายกะวีร์ สุธาทรัพย์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๔
๕) นางสาวนันท์ณภัส แปะขุนทด	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๕
๖) นางสาวพรนภา หลงคำหงษ์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๖
๗) นางสาวอภิรดี ชื่นอารมย์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๗
๘) นางสาวอัจฉรี จิตตะยโสธร	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๘
๙) นางสาวจิรพร ปานคง	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๐๙
๑๐) นายสุทธา สองธนี	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๐
๑๑) นางสาวนันประภา อูยสูงเนิน	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๑
๑๒) นายธงไชย บุญศักดิ์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๒
๑๓) นางสาวธนาพร กลิ่นโสภณ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๓
๑๔) นายธีระพงษ์ นวลอินทร์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๔
๑๕) นางสาวแพรว พลแสน	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๕
๑๖) นายทรงพล ผิวอ้วน	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๖
๑๗) นายภาคภูมิ บัวสวัสดิ์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๗
๑๘) นางสาวจันทน์ สายพันธ์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๘
๑๙) นายภาณุพงศ์ บำรุงรส	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๑๙
๒๐) นางสาวปภาณิน จันตะสอน	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๐
๒๑) นายวรกร ไวทยะเสวี	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๑
๒๒) นางสาววรรณภา ไชยศิริ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๒
๒๓) นางสาวพรพิมล ภูมิคอนสาร	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๓
๒๔) นางสาวธมลวรรณ ผลอ้อ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๔
๒๕) นางสาวบุญเรือง บุญถม	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๕
๒๖) นางสาวกสณันท์ ป้อมน้อย	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๖
๒๗) นายชานูวัฒน์ โชตะวงศ์	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๗
๒๘) นางสาวพจณี งามวิสัย	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๘
๒๙) นายวิญญ์วัล สิงห์โต	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๒๙
๓๐) นางสาวนุกูล อารศรี	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๐
๓๑) นายศุภฤกษ์ พาดกลาง	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๑
๓๒) นายณิชาพล ทองหล่อ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๒
๓๓) นายธรรมรัตน์ โพธิ์ตันคำ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๓
๓๔) นายโอชา ขวัญศิริมงคล	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๔
๓๕) นายเมธี สุขประเสริฐ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๕

COPY

๓๖) นางสาวพรพินันท์...

๓๖) นางสาวพรพินันท์ วิริยกุลกุล	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๖
๓๗) นางสาวอาภาภรณ์ เสริมสนธิ	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๗
๓๘) นางสาวนภัทร์ธมณต์ ประดิษฐ์นุช	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๘
๓๙) นางสาวสุนิษา เอ็งเส้ง	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๓๙
๔๐) นางสาวระพิน อ้นชั้น	ทะเบียนเลขที่	ว-๐๐๓-ค-๐๐๔๐

ข. เจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๒๕ ราย

๑) นางสาวดวงกมล เนื้อทอง	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๑
๒) นางสาววัชรภรณ์ อินทสุข	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๒
๓) นางสาวกัญจน์ถวิกา จันทร์ชอดแก้ว	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๓
๔) นางสาวฉัตรสุดา มงคลโกชนัน	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๔
๕) นางสาวณัฐวดี อำมาตย์ทัศน์	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๕
๖) นางสาวนิอรอุมา ปาระ	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๖
๗) นางสาวธัญลักษณ์ ชันโต	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๗
๘) นางสาวสุทธิดา สร้างแก้ว	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๘
๙) นายอุดมทรัพย์ เจนจบจริง	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๐๙
๑๐) นายนราธิป สงวนศิลป์	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๐
๑๑) นายวีระชัย พอใจ	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๑
๑๒) นายอัญชลี ทะพงษ์	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๒
๑๓) นางสาวสุมลิตรา มีแก่น	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๓
๑๔) นางสาวสวรรณยา เพชรประไพ	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๔
๑๕) นางสาวจุฑามาศ เจริญพรหม	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๕
๑๖) นางสาวนิภาพร คำขมภู	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๖
๑๗) นางสาวอรชา พันธุ์เมือง	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๗
๑๘) นายกิตติ ไพโรจน์	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๘
๑๙) นายชาญณรงค์ ตั้งธรรมรักษ์	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๑๙
๒๐) นางสาวปวีศา เอสันเทียะ	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๐
๒๑) นางสาวจุฑาทิพย์ กิจดี	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๑
๒๒) นางสาวสุภาวดี ศรีละออง	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๒
๒๓) นางสาวณัฐชยา บรรพบุตร	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๓
๒๔) นางสาวณัฐนิช นนตานอก	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๔
๒๕) นางสาวดวงสุดา แสนวันดี	ทะเบียนเลขที่	ว-๐๐๓-จ-๐๐๒๕

COPY

เอกสารแนบท้ายหนังสือรับต่ออายุขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชน

บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด เลขทะเบียน ว-๐๐๓

ที่ อก ๐๓๒๐/๑๑๓๔๒

ลงวันที่ ๒๗ กรกฎาคม ๒๕๖๖

ขอขยายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๒๙๒ รายการ

น้ำเสีย จำนวน 47 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Aldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
2	Arsenic	1) Continuous Hydride Generation/Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
3	Barium	Digestion, Inductively Coupled Plasma Method ^[4]
4	α -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
5	β -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
6	δ -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
7	γ -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
8	Biochemical Oxygen Demand	1) 5-Day BOD Test, Membrane Electrode Method ^[4] 2) 5-Day BOD Test, Azide Modification Method ^[4]
9	Cadmium	Digestion, Inductively Coupled Plasma Method ^[4]
10	Chemical Oxygen Demand	Closed Reflux, Titrimetric Method ^[4]
11	cis-Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
12	trans-Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
13	Chromium	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]

COPY

14 Color...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
14	Color	ADMI Weighted-Ordinate Spectrophotometric Method ^[4]
15	Copper	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
16	Cyanide	Distillation, Colorimetric Method ^[4]
17	4,4'-DDD	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
18	4,4'-DDE	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
19	DDT	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
20	Dieldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
21	Endosulfan I	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
22	Endosulfan II	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
23	Endosulfan sulfate	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
24	Endrin	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
25	Endrin aldehyde	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
26	Endrin ketone	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
27	Formaldehyde	Distillation, Colorimetric Method ^[3]
28	Free Chlorine	1) Iodometric Method ^[4] 2) Colorimetric Method ^[4]

COPY

29 Heptachlor...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
29	Heptachlor	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
30	Heptachlor Epoxide	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
31	Hexavalent Chromium	Filtration, Colorimetric Method ^[4]
32	Lead	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
33	Manganese	Digestion, Inductively Coupled Plasma Method ^[4]
34	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[4]
35	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[4]
36	Nickel	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
37	Oil and Grease	Liquid-Liquid, Partition-Gravimetric Method ^[4]
38	pH	Electrometric Method ^[4]
39	Phenols	Distillation, Direct Photometric Method ^[4]
40	Selenium	Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[4]
41	Sulfide	ZnS Precipitation, Iodometric Method ^[4]
42	Temperature	Field Method ^[4]
43	Trivalent Chromium	1) Digestion, Direct Air-Acetylene Flame Method; Filtration, Colorimetric Method; Calculation ^[4] 2) Digestion, Inductively Coupled Plasma Method; Colorimetric Method; Calculation ^[4]
44	Total Dissolved Solids	Dried at 180 °C ^[4]
45	Total Kjeldahl Nitrogen	Macro Kjeldahl Method ^[4]
46	Total Suspended Solids	Dried at 103-105 °C ^[4]
47	Zinc	Digestion, Inductively Coupled Plasma Method ^[4]

COPY

อากาศเสีย...

อากาศเสีย (ปล่องระบาย) จำนวน 21 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Antimony	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
2	Arsenic	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
3	Cadmium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
4	Carbon Monoxide	1) Bag, Non-Dispersive Infrared Method ^[5] 2) Instrumental Analyzer Method ^[5]
5	Chromium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
6	Cobalt	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
7	Copper	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
8	Hydrogen Sulfide	Absorption Sampling, Iodometric Method ^[5]
9	Lead	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
10	Manganese	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
11	Mercury	Isokinetic Sampling, Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[5]
12	Nickel	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
13	Opacity	Ringelmann's Method ^[1,5]
14	Oxides of Nitrogen	1) Absorption Sampling, Phenoldisulfonic Acid Method ^[8] 2) Instrumental Analyzer Method ^[7]
15	Selenium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
16	Sulfur Dioxide	1) Absorption Sampling, Barium-Thorin Titrimetric Method ^[5] 2) Instrumental Analyzer Method ^[5]
17	Sulfuric Acid	Isokinetic Sampling, Barium-Thorin Titrimetric Method ^[6]
18	Tin	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]

COPY

19 Total Suspended Particulate...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
19	Total Suspended Particulate	Isokinetic Sampling, Gravimetric Method ^[6]
20	Vanadium	Isokinetic Sampling, Digestion, Inductively Coupled Plasma Method ^[5]
21	Xylene	Adsorption Sampling, Gas Chromatographic Method ^[6]

น้ำใต้ดิน จำนวน 111 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
2	Acetone	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
3	Aldrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
4	Anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
5	Antimony	Digestion, Inductively Coupled Plasma Method ^[4]
6	Arsenic	1) Continuous Hydride Generation/Atomic Absorption Spectrometric Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
7	Barium	Digestion, Inductively Coupled Plasma Method ^[4]
8	Benz(a)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
9	Benzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
10	Benzo(b)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
11	Benzo(k)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
12	Benzo(a)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
13	Benzo[g,h,i]perylene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
14	Beryllium	Digestion, Inductively Coupled Plasma Method ^[4]

COPY

15 Bis(2-chloroethyl)ether...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
15	Bis(2-chloroethyl)ether	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
16	Bis(2-ethylhexyl)phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
17	Bromodichloromethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
18	Bromoform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
19	Butanol	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
20	Butyl benzyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
21	Cadmium	Digestion, Inductively Coupled Plasma Method ^[4]
22	Carbazole	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
23	Carbon disulfide	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
24	Carbon tetrachloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
25	Chlordane	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
26	p-Chloroaniline	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
27	Chlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
28	Chlorodibromomethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
29	Chloroform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
30	2-Chlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
31	Chromium	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
32	Chromium (III)	1) Digestion, Direct Air-Acetylene Flame Method; Filtration, Colorimetric Method; Calculation ^[4] 2) Digestion, Inductively Coupled Plasma Method; Filtration, Colorimetric Method; Calculation ^[4]

COPY

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
33	Chromium (VI)	Filtration, Colorimetric Method ^[4]
34	Chrysene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
35	Cyanide	Distillation, Colorimetric Method ^[4]
36	DDD	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
37	DDE	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
38	DDT	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
39	Dibenz(a,h)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
40	Di-n-butyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
41	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
42	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
43	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
44	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
45	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
46	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
47	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
48	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
49	2,4-Dichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
50	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
51	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]



COPY

52 Dieldrin...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
52	Dieldrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
53	Diethyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
54	2,4-Dimethylphenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
55	2,4-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
56	2,6-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
57	Di-n-octyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
58	Endosulfan	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
59	Endrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
60	Ethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
61	Fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
62	Fluorene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
63	Heptachlor	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
64	Heptachlor epoxide	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
65	Hexachlorobenzene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
66	Hexachloro-1,3-butadiene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
67	n-Hexane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
68	α -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
69	β -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]

COPY

70 γ -HCH...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
70	γ -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
71	Hexachlorocyclopentadiene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
72	Hexachloroethane	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
73	Indeno(1,2,3-cd)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
74	Isophorone	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
75	Lead	1) Digestion, Direct Air-Acetylene Flame Method ^[4] 2) Digestion, Inductively Coupled Plasma Method ^[4]
76	Manganese	Digestion, Inductively Coupled Plasma Method ^[4]
77	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[4]
78	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
79	Methylene chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
80	2-Methylphenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
81	2-Methylnaphthalene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
82	Methyl tert-butyl ether	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
83	Naphthalene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
84	Nickel	Digestion, Inductively Coupled Plasma Method ^[4]
85	Nitrobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
86	N-Nitrosodi-n-propylamine	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
87	pH	Electrometric Method ^[4]
88	Phenanthrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]

COPY

89 Phenol...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
89	Phenol	1) Distillation, Direct Photometric Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
90	Pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
91	Selenium	Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[4]
92	Silver	Digestion, Inductively Coupled Plasma Method ^[4]
93	Styrene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
94	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
95	Trichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
96	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
97	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
98	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
99	Tetrachloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
100	Toluene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
101	2,4,5-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
102	2,4,6-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
103	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
104	Vanadium	Digestion, Inductively Coupled Plasma Method ^[4]
105	Vinyl acetate	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
106	Vinyl chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]

COPY

107 m-Xylene...

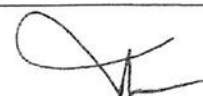
ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
107	m-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
108	o-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
109	p-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
110	Xylene (Total)	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
111	Zinc	Digestion, Inductively Coupled Plasma Method ^[4]

สิ่งปฏิกูลหรือวัสดุที่ไม่ใช้แล้ว จำนวน 18 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Antimony	Digestion, Inductively Coupled Plasma Method ^[9,10]
2	Arsenic	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
3	Barium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
4	Beryllium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
5	Cadmium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
6	Chromium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
7	Chromium (VI)	1) Waste Extraction, Digestion, Colorimetric Method ^[2,13] 2) Alkaline Digestion, Colorimetric Method ^[9,13]
8	Cobalt	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
9	Copper	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]

COPY

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
10	Lead	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
11	Mercury	1) Waste Extraction, Digestion, Cold Vapor Atomic Absorption Spectrometric Method ^[2,11] 2) Digestion, Cold vapor Atomic Absorption Spectrometric Method ^[9,11]
12	Nickel	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
13	Molybdenum	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
14	Selenium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
15	Silver	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
16	Thallium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
17	Vanadium	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]
18	Zinc	1) Waste Extraction, Digestion, Inductively Coupled Plasma Method ^[2,9,10] 2) Digestion, Inductively Coupled Plasma Method ^[9,10]



COPY

ดิน...

ดิน จำนวน 95 รายการ

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
2	Acetone	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
3	Anthracene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
4	Antimony	Digestion, Inductively Coupled Plasma Method ^[9,10]
5	Arsenic	Digestion, Inductively Coupled Plasma Method ^[9,10]
6	Barium	Digestion, Inductively Coupled Plasma Method ^[9,10]
7	Benz(a)anthracene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
8	Benzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
9	Benzo(b)fluoranthene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
10	Benzo(k)fluoranthene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
11	Benzo(a)pyrene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
12	Benzo[g,h,i]perylene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
13	Beryllium	Digestion, Inductively Coupled Plasma Method ^[9,10]
14	Bis(2-chloroethyl)ether	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
15	Bis(2-ethylhexyl)phthalate	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
16	Bromodichloromethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
17	Bromoform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
18	Butanol	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]

COPY

19 Butyl benzyl phthalate...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
19	Butyl benzyl phthalate	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
20	Cadmium	Digestion, Inductively Coupled Plasma Method ^[9,10]
21	Carbazole	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
22	Carbon disulfide	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
23	Carbon tetrachloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
24	p-Chloroaniline	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
25	Chlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
26	Chlorodibromomethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
27	Chloroform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
28	2-Chlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
29	Chromium	Digestion, Inductively Coupled Plasma Method ^[9,10]
30	Chromium (III)	Digestion, Inductively Coupled Plasma Method; Filtration, Colorimetric Method; Calculation ^[9,10]
31	Chromium (VI)	Alkaline Digestion, Colorimetric Method ^[12,13]
32	Chrysene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
33	Dibenz(a,h)anthracene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
34	Di-n-butyl phthalate	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
35	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
36	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
37	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]

COPY

38 1,1-Dichloroethane...

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
38	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
39	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
40	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
41	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
42	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
43	2,4-Dichlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
44	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
45	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
46	Diethyl phthalate	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
47	2,4-Dimethylphenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
48	2,4-Dinitrotoluene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
49	2,6-Dinitrotoluene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
50	Di-n-octyl phthalate	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
51	Ethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
52	Fluoranthene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
53	Fluorene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
54	Hexachlorobenzene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
55	Hexachloro-1,3-butadiene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]

COPY

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
56	n-Hexane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
57	Hexachlorocyclopentadiene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
58	Hexachloroethane	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
59	Indeno(1,2,3-cd)pyrene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
60	Isophorone	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
61	Lead	Digestion, Inductively Coupled Plasma Method ^[9,10]
62	Manganese	Digestion, Inductively Coupled Plasma Method ^[9,10]
63	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[9,11]
64	Methylene chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
65	2-Methylphenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
66	2-Methylnaphthalene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
67	Methyl tert-butyl ether	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
68	Naphthalene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
69	Nickel	Digestion, Inductively Coupled Plasma Method ^[9,10]
70	Nitrobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
71	N-Nitrosodi-n-propylamine	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
72	Phenanthrene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
73	Phenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
74	Pyrene	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]

COPY

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
75	Selenium	Digestion, Inductively Coupled Plasma Method ^[9,10]
76	Silver	Digestion, Inductively Coupled Plasma Method ^[9,10]
77	Styrene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
78	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
79	Tetrachloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
80	Toluene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
81	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
82	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
83	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
84	Trichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
85	2,4,5-Trichlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
86	2,4,6-Trichlorophenol	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[15,17]
87	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
88	Vanadium	Digestion, Inductively Coupled Plasma Method ^[9,10]
89	Vinyl acetate	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
90	Vinyl chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
91	m-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
92	o-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
93	p-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]

COPY

ลำดับที่	สารมลพิษ	วิธีวิเคราะห์
94	Xylene (Total)	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[14,16]
95	Zinc	Digestion, Inductively Coupled Plasma Method ^[9,10]

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ที่ อก ๐๓๒๐/ ๕๖๐๕ 1



กรมโรงงานอุตสาหกรรม
ถนนพระรามที่ ๖ แขวงทุ่งพญาไท
เขตราชเทวี กรุงเทพฯ ๑๐๕๐๐

๑๕ พฤษภาคม ๒๕๖๗

เรื่อง เปลี่ยนแปลงเอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษ เปลี่ยนแปลงสารมลพิษในดิน และเปลี่ยนแปลงบุคลากร
ของห้องปฏิบัติการวิเคราะห์

เรียน กรรมการผู้จัดการ บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด

อ้างถึง คำขอขึ้นทะเบียน/ต่ออายุ/เปลี่ยนแปลงบุคลากร และชนิดสารมลพิษของห้องปฏิบัติการวิเคราะห์เอกชน
ลงวันที่ ๕ มีนาคม ๒๕๖๗

สิ่งที่ส่งมาด้วย เอกสารแนบท้ายหนังสือเปลี่ยนแปลงเอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษ และเปลี่ยนแปลง
สารมลพิษบริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด จำนวน ๑๒ แผ่น

ตามคำขอฯ ที่อ้างถึง บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด ห้องปฏิบัติการวิเคราะห์
เอกชน เลขทะเบียน ว-๐๐๓ สถานที่ตั้งเลขที่ ๖๘๓ หมู่ที่ ๑๑ ถนนสุขาภิบาล ๘ ตำบลหนองขาม
อำเภอศรีราชา จังหวัดชลบุรี แจ้งขอเปลี่ยนแปลงเอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษในน้ำเสีย น้ำใต้ดิน
เปลี่ยนแปลงสารมลพิษในดิน และเปลี่ยนแปลงบุคลากร นั้น

กรมโรงงานอุตสาหกรรมพิจารณาแล้ว มีความเห็นดังนี้

๑. ให้ยกเลิกผู้ควบคุมดูแลห้องปฏิบัติการวิเคราะห์ จำนวน ๑ ราย

นายวัฒนา โคตรหล้า ทะเบียนเลขที่ ว-๐๐๓-ค-๐๐๐๒

๒. ให้ยกเลิกเจ้าหน้าที่ประจำห้องปฏิบัติการวิเคราะห์ จำนวน ๓ ราย

๑) นางสาวอัญชลี ทะพงษ์ ทะเบียนเลขที่ ว-๐๐๓-จ-๐๐๑๒

๒) นางสาวจุฑามาศ เจริญพรหม ทะเบียนเลขที่ ว-๐๐๓-จ-๐๐๑๕

๓) นางสาวณัฐนิช นนตานอก ทะเบียนเลขที่ ว-๐๐๓-จ-๐๐๒๔

๓. ให้ยกเลิกขอบข่ายรายการสารมลพิษในน้ำเสีย และน้ำใต้ดินตามรายการเอกสารแนบท้าย
หนังสือต่ออายุรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์เอกชนที่ อก ๐๓๒๐/๑๑๓๔๒ ลงวันที่ ๒๗ กรกฎาคม ๒๕๖๖

๔. ให้วิเคราะห์สารมลพิษตามขอบข่ายที่ได้รับขึ้นทะเบียนให้วิเคราะห์ในน้ำเสีย จำนวน ๔๗ รายการ
และน้ำใต้ดิน จำนวน ๑๑๑ รายการ รวมทั้งสิ้นจำนวน ๑๕๘ รายการ ตามเอกสารแนบท้ายหนังสือเปลี่ยนแปลง
เอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษ เปลี่ยนแปลงสารมลพิษในดิน และเปลี่ยนแปลงบุคลากร ดังสิ่งที่ส่งมาด้วย

๕. ให้วิเคราะห์สารมลพิษตามขอบข่ายที่ได้รับขึ้นทะเบียนให้วิเคราะห์เพิ่มเติมในดิน จำนวน
๑๒ รายการ ตามเอกสารแนบท้ายหนังสือเปลี่ยนแปลงเอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษเปลี่ยนแปลงสารมลพิษ
ในดิน และเปลี่ยนแปลงบุคลากร ดังสิ่งที่ส่งมาด้วย

อนึ่ง หนังสือ

COPY



อนึ่ง หนังสือฉบับนี้จะหมดอายุพร้อมหนังสือต่ออายุรับขึ้นทะเบียนห้องปฏิบัติการวิเคราะห์
เอกชนในวันที่ ๕ กรกฎาคม ๒๕๖๙

จึงเรียนมาเพื่อทราบ

ขอแสดงความนับถือ



(นายพรศ กลั่นกรอง)

รองอธิบดี ปฏิบัติราชการแทน

อธิบดีกรมโรงงานอุตสาหกรรม

ศูนย์วิจัยและเตือนภัยมลพิษโรงงานภาคตะวันออก

โทร. ๐ ๓๓๑๓ ๖๐๕๙ ต่อ ๕๐๐๑-๒

ไปรษณีย์อิเล็กทรอนิกส์ eirw@diw.mail.go.th

COPY



“อุตสาหกรรมก้าวไกล ประเทศไทยก้าวหน้า ร่วมกันพัฒนา อุตสาหกรรมสีเขียว”



เอกสารแนบท้ายหนังสือเปลี่ยนแปลงเอกสารอ้างอิงวิธีวิเคราะห์สารมลพิษ

บริษัท อีสเทิร์น ไทย คอนซัลติ้ง ๑๙๙๒ จำกัด

เลขทะเบียน ว-๐๐๓

ที่ ออก ๐๓๒๐/

ลงวันที่

ขอขยายสารมลพิษที่ได้รับขึ้นทะเบียนจากกรมโรงงานอุตสาหกรรม จำนวน ๑๗๐ รายการ

น้ำเสีย จำนวน 47 รายการ

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
1	Aldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
2	Arsenic	1) Continuous Hydride Generation/Atomic Absorption Spectrometric Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
3	Barium	Digestion, Inductively Coupled Plasma Method ^[1]
4	α -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
5	β -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
6	δ -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
7	γ -BHC	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
8	Biochemical Oxygen Demand	1) 5-Day BOD Test, Membrane Electrode Method ^[1] 2) 5-Day BOD Test, Azide Modification Method ^[1]
9	Cadmium	Digestion, Inductively Coupled Plasma Method ^[1]
10	Chemical Oxygen Demand	Closed Reflux, Titrimetric Method ^[1]
11	cis-Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]

COPY

12 trans-Chlordane ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
12	trans-Chlordane	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
13	Chromium	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
14	Color	ADMI Weighted-Ordinate Spectrophotometric Method ^[1]
15	Copper	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
16	Cyanide	Distillation, Colorimetric Method ^[1]
17	4,4'-DDD	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
18	4,4'-DDE	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
19	DDT	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
20	Dieldrin	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
21	Endosulfan I	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
22	Endosulfan II	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
23	Endosulfan sulfate	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
24	Endrin	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]

COPY

25 Endrin aldehyde ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
25	Endrin aldehyde	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
26	Endrin ketone	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
27	Formaldehyde	Distillation, Colorimetric Method ^[4]
28	Free Chlorine	1) Iodometric Method ^[1] 2) Colorimetric Method ^[1]
29	Heptachlor	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
30	Heptachlor Epoxide	1) Liquid-Liquid Extraction, Gas Chromatographic Method ^[1] 2) Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
31	Hexavalent Chromium	Filtration, Colorimetric Method ^[1]
32	Lead	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
33	Manganese	Digestion, Inductively Coupled Plasma Method ^[1]
34	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[1]
35	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic / Mass Spectrometric Method ^[1]
36	Nickel	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
37	Oil and Grease	Liquid-Liquid, Partition-Gravimetric Method ^[1]
38	pH	Electrometric Method ^[1]
39	Phenols	Distillation, Direct Photometric Method ^[1]
40	Selenium	Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[1]

COPY

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
41	Sulfide	ZnS Precipitation, Iodometric Method ^[1]
42	Temperature	Field Method ^[1]
43	Trivalent Chromium	1) Digestion, Direct Air-Acetylene Flame Method; Filtration, Colorimetric Method; Calculation ^[1] 2) Digestion, Inductively Coupled Plasma Method; Colorimetric Method; Calculation ^[1]
44	Total Dissolved Solids	Dried at 180 °C ^[1]
45	Total Kjeldahl Nitrogen	Macro Kjeldahl Method ^[1]
46	Total Suspended Solids	Dried at 103-105 °C ^[1]
47	Zinc	Digestion, Inductively Coupled Plasma Method ^[1]

น้ำใต้ดิน จำนวน 111 รายการ

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
1	Acenaphthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
2	Acetone	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
3	Aldrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
4	Anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
5	Antimony	Digestion, Inductively Coupled Plasma Method ^[1]
6	Arsenic	1) Continuous Hydride Generation/Atomic Absorption Spectrometric Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
7	Barium	Digestion, Inductively Coupled Plasma Method ^[1]
8	Benz(a)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]

COPY

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
9	Benzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
10	Benzo(b)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
11	Benzo(k)fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
12	Benzo(a)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
13	Benzo[g,h,i]perylene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
14	Beryllium	Digestion, Inductively Coupled Plasma Method ^[1]
15	Bis(2-chloroethyl)ether	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
16	Bis(2-ethylhexyl)phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
17	Bromodichloromethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
18	Bromoform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
19	Butanol	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
20	Butyl benzyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
21	Cadmium	Digestion, Inductively Coupled Plasma Method ^[1]
22	Carbazole	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
23	Carbon disulfide	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
24	Carbon tetrachloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
25	Chlordane	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
26	p-Chloroaniline	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
27	Chlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
28	Chlorodibromomethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
29	Chloroform	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
30	2-Chlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
31	Chromium	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
32	Chromium (III)	1) Digestion, Direct Air-Acetylene Flame Method; Filtration, Colorimetric Method; Calculation ^[1] 2) Digestion, Inductively Coupled Plasma Method; Filtration, Colorimetric Method; Calculation ^[1]
33	Chromium (VI)	Filtration, Colorimetric Method ^[1]
34	Chrysene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
35	Cyanide	Distillation, Colorimetric Method ^[1]
36	DDD	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
37	DDE	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
38	DDT	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
39	Dibenz(a,h)anthracene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]

COPY

40 Di-n-butyl phthalate ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
40	Di-n-butyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
41	1,2-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
42	1,3-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
43	1,4-Dichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
44	1,1-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
45	1,2-Dichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
46	1,1-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
47	cis-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
48	trans-1,2-Dichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
49	2,4-Dichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
50	1,2-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
51	1,3-Dichloropropane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
52	Dieldrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
53	Diethyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
54	2,4-Dimethylphenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]

COPY

55 2,4-Dinitrotoluene ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
55	2,4-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
56	2,6-Dinitrotoluene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
57	Di-n-octyl phthalate	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
58	Endosulfan	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
59	Endrin	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
60	Ethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
61	Fluoranthene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
62	Fluorene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
63	Heptachlor	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
64	Heptachlor epoxide	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
65	Hexachlorobenzene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
66	Hexachloro-1,3-butadiene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
67	n-Hexane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
68	α -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
69	β -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]

COPY

70 γ -HCH ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
70	γ -HCH	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
71	Hexachlorocyclopentadiene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
72	Hexachloroethane	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
73	Indeno(1,2,3-cd)pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
74	Isophorone	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
75	Lead	1) Digestion, Direct Air-Acetylene Flame Method ^[1] 2) Digestion, Inductively Coupled Plasma Method ^[1]
76	Manganese	Digestion, Inductively Coupled Plasma Method ^[1]
77	Mercury	Digestion, Cold-Vapor Atomic Absorption Spectrometric Method ^[1]
78	Methoxychlor	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
79	Methylene chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
80	2-Methylphenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
81	2-Methylnaphthalene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
82	Methyl tert-butyl ether	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
83	Naphthalene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]
84	Nickel	Digestion, Inductively Coupled Plasma Method ^[1]
85	Nitrobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[1]

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
86	N-Nitrosodi-n-propylamine	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[1]
87	pH	Electrometric Method ^[4]
88	Phenanthrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
89	Phenol	1) Distillation, Direct Photometric Method ^[4] 2) Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
90	Pyrene	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
91	Selenium	Digestion, Hydride Generation/Atomic Absorption Spectrometric Method ^[4]
92	Silver	Digestion, Inductively Coupled Plasma Method ^[4]
93	Styrene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
94	1,1,2,2-Tetrachloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
95	Trichloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
96	1,2,4-Trichlorobenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
97	1,1,1-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
98	1,1,2-Trichloroethane	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
99	Tetrachloroethylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
100	Toluene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
101	2,4,5-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
102	2,4,6-Trichlorophenol	Liquid-Liquid Extraction, Gas Chromatographic/Mass Spectrometric Method ^[4]
103	1,3,5-Trimethylbenzene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
104	Vanadium	Digestion, Inductively Coupled Plasma Method ^[4]
105	Vinyl acetate	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
106	Vinyl chloride	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
107	m-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
108	o-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
109	p-Xylene	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
110	Xylene (Total)	Purge and Trap, Gas Chromatographic/Mass Spectrometric Method ^[4]
111	Zinc	Digestion, Inductively Coupled Plasma Method ^[4]

ดิน จำนวน 12 รายการ

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
1	α -HCH	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
2	β -HCH	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
3	γ -HCH	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
4	Heptachlor	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]

COPY

5 Aldrin ...

ลำดับ ที่	สารมลพิษ	วิธีวิเคราะห์
5	Aldrin	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
6	Heptachlor epoxide	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
7	Chlordane	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
8	Dieldrin	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
9	Endrin	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
10	DDD	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
11	DDT	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]
12	Methoxychlor	Ultrasonic Extraction, Gas Chromatographic/Mass Spectrometric Method ^[2,3]

เอกสารอ้างอิง

1. APHA, AWWA, WEF. **Standard Methods for the Examination of Water and Wastewater**. 24th ed. Washington, DC: APHA, 2023.
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3. United States Environment Protection Agency. Test Methods for Evaluation Solid Waste Physical/Chemical Methods. **Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry. SW-846 Method 8270E**, 2018
4. สมาคมวิศวกรรมสิ่งแวดล้อมแห่งประเทศไทย. คู่มือวิเคราะห์น้ำเสีย. พิมพ์ครั้งที่ 4. กรุงเทพฯ: เรือนแก้วการพิมพ์, 2547.

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ภาคผนวกที่ 3

ใบรับรองความสามารถห้องปฏิบัติการวิเคราะห์



ที่ อว 0303/18183

ใบรับรองความสามารถห้องปฏิบัติการทดสอบ

ใบรับรองฉบับนี้ให้ไว้เพื่อแสดงว่า

ห้องปฏิบัติการ บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด
เลขที่ 683 หมู่ที่ 11 ถนนสุขาภิบาล 8 ตำบลหนองขาม
อำเภอสรีราชา จังหวัดชลบุรี 20230

ได้ผ่านการประเมินความสามารถห้องปฏิบัติการทดสอบตามมาตรฐาน ISO/IEC 17025 : 2017
และข้อกำหนด กฎระเบียบ และเงื่อนไขการรับรองความสามารถห้องปฏิบัติการทดสอบ
ของกองบริหารและรับรองห้องปฏิบัติการ กรมวิทยาศาสตร์บริการ
หมายเลขการรับรองระบบงานที่ ทดสอบ - 0159

รายละเอียดการรับรองดังขอบข่ายการรับรองแนบท้าย

ออกให้ ณ วันที่ : 7 พฤศจิกายน 2566

หมดอายุ วันที่ : 6 พฤศจิกายน 2570

ลงชื่อ : 

(นางจันทรัตน์ วรสรรพวิทย)

นักวิทยาศาสตร์ชำนาญการพิเศษ

รักษาราชการแทน ผู้อำนวยการกองบริหารและรับรองห้องปฏิบัติการ

กองบริหารและรับรองห้องปฏิบัติการ กรมวิทยาศาสตร์บริการ
กระทรวงการอุดมศึกษา วิทยาศาสตร์ วิจัย และนวัตกรรม

ขอข่ายการรับรองความสามารถห้องปฏิบัติการทดสอบ

ชื่อห้องปฏิบัติการ : ห้องปฏิบัติการ บริษัท อีสเทิร์น ไทย คอนซัลตัง 1992 จำกัด

สถานที่ตั้ง : เลขที่ 683 หมู่ที่ 11 ถนนสุขาภิบาล 8 ตำบลหนองขาม
อำเภอศรีราชา จังหวัดชลบุรี 20230

หมายเลขการรับรองระบบงานที่ : ทดสอบ - 0159

สถานะของห้องปฏิบัติการ : ☒ถาวร ☐นอกสถานที่ ☐ชั่วคราว ☐เคลื่อนที่

ลำดับ ที่	วัสดุ / ผลิตภัณฑ์ที่ทดสอบ	รายการที่ทดสอบ / ช่วงของการทดสอบ	วิธีทดสอบ / เทคนิคที่ใช้
1	น้ำ	- ซีโอดี 40 mg/L ถึง 5 000 mg/L - โปรท 0.001 mg/L ถึง 0.02 mg/L - บีโอดี 2 mg/L ถึง 5 000 mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5220 C Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 3112 B Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5210 B

ออกครั้งแรก ณ วันที่ 21 พฤศจิกายน 2560

ฉบับที่ 4

ขอข่ายการรับรองความสามารถห้องปฏิบัติการทดสอบ

ชื่อห้องปฏิบัติการ : ห้องปฏิบัติการ บริษัท อีสเทิร์น ไทย คอนซัลตติ้ง 1992 จำกัด

สถานที่ตั้ง : เลขที่ 683 หมู่ที่ 11 ถนนสุขาภิบาล 8 ตำบลหนองขาม
อำเภอศรีราชา จังหวัดชลบุรี 20230

หมายเลขการรับรองระบบงานที่ : ทดสอบ - 0159

สถานะของห้องปฏิบัติการ : ☒ ถาวร ☐ นอกสถานที่ ☐ ชั่วคราว ☐ เคลื่อนที่

ลำดับ ที่	วัสดุ / ผลิตภัณฑ์ที่ทดสอบ	รายการที่ทดสอบ / ช่วงของการทดสอบ	วิธีทดสอบ / เทคนิคที่ใช้
1 (ต่อ)	น้ำ	- สารที่ละลายได้ทั้งหมด ที่อุณหภูมิ 180 °C 25 mg/L ถึง 10 000 mg/L - สารแขวนลอยทั้งหมด ที่อุณหภูมิ 103 °C ถึง 105 °C 5 mg/L ถึง 2 000 mg/L - ฟลูออไรด์ 0.5 mg/L ถึง 10 mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 2540 C Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 2540 D Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500-F C

ออกครั้งแรก ณ วันที่ 21 พฤศจิกายน 2560

ฉบับที่ 4

ขอข่ายการรับรองความสามารถห้องปฏิบัติการทดสอบ

ชื่อห้องปฏิบัติการ : ห้องปฏิบัติการ บริษัท อีสเทิร์น ไทย คอนซัลตัง 1992 จำกัด

สถานที่ตั้ง : เลขที่ 683 หมู่ที่ 11 ถนนสุขาภิบาล 8 ตำบลหนองขาม
อำเภอศรีราชา จังหวัดชลบุรี 20230

หมายเลขการรับรองระบบงานที่ : ทดสอบ - 0159

สถานะของห้องปฏิบัติการ : ☒ ถาวร ☐ นอกสถานที่ ☐ชั่วคราว ☐เคลื่อนที่

ลำดับ ที่	วัสดุ / ผลิตภัณฑ์ที่ทดสอบ	รายการที่ทดสอบ / ช่วงของการทดสอบ	วิธีทดสอบ / เทคนิคที่ใช้
2	น้ำเสีย	- ซีโอดี 40 mg/L ถึง 5 000 mg/L - โปรท 0.001 mg/L ถึง 0.02 mg/L - บีโอดี 2 mg/L ถึง 5 000 mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5220 C Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 3112 B Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 5210 B

ออกครั้งแรก ณ วันที่ 21 พฤศจิกายน 2560

ฉบับที่ 4

ขอข่ายการรับรองความสามารถห้องปฏิบัติการทดสอบ

ชื่อห้องปฏิบัติการ : ห้องปฏิบัติการ บริษัท อีสเทิร์น ไทย คอนซัลตัง 1992 จำกัด

สถานที่ตั้ง : เลขที่ 683 หมู่ที่ 11 ถนนสุขาภิบาล 8 ตำบลหนองขาม
อำเภอศรีราชา จังหวัดชลบุรี 20230

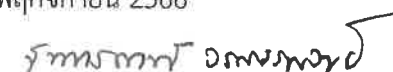
หมายเลขการรับรองระบบงานที่ : ทดสอบ - 0159

สถานะของห้องปฏิบัติการ : ☒ ถาวร ☐ นอกสถานที่ ☐ชั่วคราว ☐เคลื่อนที่

ลำดับ ที่	วัสดุ / ผลิตภัณฑ์ที่ทดสอบ	รายการที่ทดสอบ / ช่วงของการทดสอบ	วิธีทดสอบ / เทคนิคที่ใช้
2 (ต่อ)	น้ำเสีย	- สารที่ละลายได้ทั้งหมด ที่อุณหภูมิ 180 °C 25 mg/L ถึง 10 000 mg/L - สารแขวนลอยทั้งหมด ที่อุณหภูมิ 103 °C ถึง 105 °C 5 mg/L ถึง 2 000 mg/L - ฟลูออไรด์ 0.5 mg/L ถึง 10 mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 2540 C Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 2540 D Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23 rd ed., 2017, part 4500-F C

ออกให้ ณ วันที่ : 7 พฤศจิกายน 2566

ลงชื่อ :



(นางจันทน์ วรสรพวิทย์)

นักวิทยาศาสตร์ชำนาญการพิเศษ

รักษาราชการแทน ผู้อำนวยการกองบริหารและรับรองห้องปฏิบัติการ

ออกครั้งแรก ณ วันที่ 21 พฤศจิกายน 2560

ฉบับที่ 4



ใบรับรองเลขที่ 23-LB0251
(Certificate No.)

ใบรับรองระบบงาน (Certificate of Accreditation)

อาศัยอำนาจตามความในพระราชบัญญัติการมาตรฐานแห่งชาติ พ.ศ. ๒๕๕๑
(By Virtue of National Standardization Act B.E. 2551 (2008))

เลขาธิการสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม
(Secretary-General, Thai Industrial Standards Institute)

ออกใบรับรองฉบับนี้ให้
(Issues this certificate to)

บริษัท อีสเทิร์น ไทย คอนซัลติง 1992 จำกัด
(Eastern Thai Consulting 1992 Co., Ltd.)

ตั้งอยู่เลขที่
(Address)

๖๘๓ หมู่ที่ ๑๑ ถนนสุขาภิบาล ๘ ตำบลหนองขาม อำเภอสรีราชา จังหวัดชลบุรี
(683 Moo 11, Sukhapibarn 8 Road, Nongkham, Sriracha, Chonburi)

ได้รับการรับรองความสามารถ
(Certificate of competence)

ตามมาตรฐานเลขที่ มอก. ๑๗๐๒๕ - ๒๕๖๑
(Standard No. TIS 17025-2561 (2018) (ISO/IEC 17025: 2017))

ข้อกำหนดทั่วไปว่าด้วยความสามารถของ ห้องปฏิบัติการทดสอบและห้องปฏิบัติการสอบเทียบ
(General requirements for the competence of testing and calibration laboratories)

หมายเลขการรับรองที่ ทดสอบ ๑๗๑๒
(Accreditation No. Testing 1712)

โดยมีรายละเอียดสาขาและขอบข่ายที่ได้ใบรับรอง แสดงไว้ใน QR CODE และ www.tisi.go.th
(Details of the scheme and scope of the certificate are shown in QR CODE and www.tisi.go.th)

ออกให้ ณ วันที่ ๒๓ สิงหาคม พ.ศ. ๒๕๖๖
(Issue date : 23 August B.E. 2566 (2023))

(นายเอกนิติ รมยานนท์)

รองเลขาธิการสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม

ปฏิบัติราชการแทน

เลขาธิการสำนักงานมาตรฐานผลิตภัณฑ์อุตสาหกรรม



c88f6993



รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0251

(Certification No. 23-LB0251)



ชื่อห้องปฏิบัติการ
(Laboratory Name)

บริษัท อีสเทิร์น ไทย คอนซัลติ้ง 1992 จำกัด
(Eastern Thai Consulting 1992 Co.,Ltd.)

หมายเลขการรับรองที่
(Accreditation No.)

ทดสอบ 1712
(Testing 1712)

ฉบับที่ 01
(Issue No.01)

ออกให้ตั้งแต่วันที่ 17 กรกฎาคม พ.ศ. 2566
(Valid from) (17 July B.E.2566 (2023))

ถึงวันที่ 16 กรกฎาคม พ.ศ. 2571
(Until) (16 July B.E.2571 (2028))

สถานภาพห้องปฏิบัติการ
(Laboratory status)

☒ ถาวร
(Permanent)

☐ นอกสถานที่
(Site)

☐ชั่วคราว
(Temporary)

☐เคลื่อนที่
(Mobile)

☐หลายสถานที่
(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาสิ่งแวดล้อม (Environmental field)</p> <p>1. น้ำ (Water)</p>	<p>- โลหะหนัก (Heavy metal)</p> <ul style="list-style-type: none"> โครเมียม (Cr) 0.03 mg/L to 2.00 mg/L ทองแดง (Cu) 0.03 mg/L to 2.00 mg/L เหล็ก (Fe) 0.03 mg/L to 2.00 mg/L ตะกั่ว (Pb) 0.01 mg/L to 1.00 mg/L นิกเกิล (Ni) 0.03 mg/L to 2.00 mg/L อลูมิเนียม (Al) 0.10 mg/L to 2.00 mg/L แบเรียม (Ba) 0.03 mg/L to 2.00 mg/L แคดเมียม (Cd) 0.003 mg/L to 1.00 mg/L แมงกานีส (Mn) 0.03 mg/L to 2.00 mg/L เงิน (Ag) 0.05 mg/L to 2.00 mg/L สังกะสี (Zn) 0.03 mg/L to 2.00 mg/L 	<p>- Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF 23rd edition 2017. Part 3030 F and 3120 B</p>

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0251

(Certification No. 23-LB0251)



ฉบับที่ 01

(Issue No.)

ออกให้ตั้งแต่วันที่ 17 กรกฎาคม พ.ศ. 2566

(Valid from)

(17 July B.E.2566 (2023))

ถึงวันที่ 16 กรกฎาคม พ.ศ. 2571

(Until) (16 July B.E.2571 (2028))

สถานภาพห้องปฏิบัติการ

(Laboratory status)

☒ ถาวร

(Permanent)

☐ นอกสถานที่

(Site)

☐ชั่วคราว

(Temporary)

☐เคลื่อนที่

(Mobile)

☐หลายสถานที่

(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาสิ่งแวดล้อม (Environmental field)</p> <p>1. น้ำ (ต่อ) (Water) (cont.)</p> <p>2. น้ำเสีย (Wastewater)</p>	<p>- ไขมันและน้ำมัน (Oil & Grease) 3.0 mg/L - 20.0 mg/L</p> <p>- โลหะหนัก (Heavy metal)</p> <ul style="list-style-type: none"> โครเมียม (Cr) 0.03 mg/L to 2.00 mg/L ทองแดง (Cu) 0.03 mg/L to 2.00 mg/L เหล็ก (Fe) 0.03 mg/L to 2.00 mg/L ตะกั่ว (Pb) 0.03 mg/L to 2.00 mg/L นิกเกิล (Ni) 0.03 mg/L to 2.00 mg/L อลูมิเนียม (Al) 0.10 mg/L to 2.00 mg/L แบเรียม (Ba) 0.03 mg/L to 2.00 mg/L แคดเมียม (Cd) 0.03 mg/L to 2.00 mg/L 	<p>- Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF 23rd edition 2017. Part 5520 B</p> <p>- Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF 23rd edition 2017. Part 3030 F and 3120 B</p>

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0251

(Certification No. 23-LB0251)



ฉบับที่ 01

(Issue No.01)

ออกให้ตั้งแต่วันที่ 17 กรกฎาคม พ.ศ. 2566

(Valid from)

(17 July B.E.2566 (2023))

ถึงวันที่ 16 กรกฎาคม พ.ศ. 2571

(Until) (16 July B.E.2571 (2028))

สถานภาพห้องปฏิบัติการ

(Laboratory status)

☒ ถาวร

(Permanent)

☐ นอกสถานที่

(Site)

☐ชั่วคราว

(Temporary)

☐เคลื่อนที่

(Mobile)

☐หลายสถานที่

(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาสังแวดล้อม (Environmental field)</p> <p>2. น้ำเสีย (ต่อ) (Wastewater) (cont.)</p>	<p>- โลหะหนัก (ต่อ) (Heavy metal) (cont.)</p> <ul style="list-style-type: none"> • แมงกานีส (Mn) 0.03 mg/L to 2.00 mg/L • เงิน (Ag) 0.05 mg/L to 2.00 mg/L • สังกะสี (Zn) 0.03 mg/L to 2.00 mg/L <p>- ไขมันและน้ำมัน (Oil & Grease) 3.0 mg/L - 20.0 mg/L</p>	<p>- Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF 23rd edition 2017. Part 3030 F and 3120 B</p> <p>- Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF 23rd edition 2017. Part 5520 B</p>

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ
(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0251
(Certification No. 23-LB0251)



ฉบับที่ 01
(Issue No.)

ออกให้ตั้งแต่วันที่ 17 กรกฎาคม พ.ศ. 2566
(Valid from) (17 July B.E.2566 (2023))

ถึงวันที่ 16 กรกฎาคม พ.ศ. 2571
(Until) (16 July B.E.2571 (2028))

สถานภาพห้องปฏิบัติการ
(Laboratory status)

☐ ถาวร
(Permanent)

☒ นอกสถานที่
(Site)

☐ชั่วคราว
(Temporary)

☐เคลื่อนที่
(Mobile)

☐หลายสถานที่
(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาสีงแวดล้อม (Environmental field)</p> <p>3.พื้นที่การทำงาน (Workplace)</p>	<p>- ระดับเสียง (Sound Level)</p> <ul style="list-style-type: none"> • ระดับเสียงเฉลี่ย L_{eqT} ช่วง 30 - 130 dB(A) • ระดับเสียงสูงสุด L_{max} ช่วง 30 - 130 dB(A) 	<p>- ISO 11202:2010</p> <p>- ประกาศกระทรวงอุตสาหกรรม เรื่องมาตรการคุ้มครองความปลอดภัยในการประกอบกิจการโรงงานเกี่ยวกับสภาวะแวดล้อมในการทำงาน พ.ศ.2546 ลงวันที่ 6 พ.ย. 2546 (Notification of The Ministry of Industry B.E. 2546 (2003) on the Safety Protection Measures in Factory Regarding Working Area Environment, dated November 6, 2003)</p> <p>- ประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่องมาตรฐานระดับเสียงที่ยอมให้ลูกจ้างได้รับเฉลี่ยตลอดระยะเวลาการทำงานในแต่ละวัน ลงวันที่ 13 ธ.ค. 2560 (Notification of the Department of Labor Protection and Welfare on the standard of noise level that employees are allowed to receive in average period of work each day, dated December 13, 2017.)</p> <p>- ประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่องหลักเกณฑ์ วิธีการตรวจวัดและการวิเคราะห์สภาวะการทำงานเกี่ยวกับระดับความร้อน แสงสว่าง หรือเสียง รวมทั้งระยะเวลาและประเภทกิจการที่ต้องดำเนินการ ลงวันที่ 8 ก.พ. 2561 (Notification of the Department of Labor Protection and Welfare on Criteria, Measurement Methods, and Analysis of Working Conditions Regarding Heat, Light, or Noise Levels, Including Duration and Types of Businesses to Be Performed, dated February 8, 2018.)</p>

รายละเอียดสาขาและขอบข่ายใบรับรองห้องปฏิบัติการ

(Scope of Accreditation for Testing)

ใบรับรองเลขที่ 23-LB0251

(Certification No. 23-LB0251)



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☐หลายสถานที่

(Multisite)

สาขาการทดสอบ (Field of Testing)	รายการทดสอบ (Parameter)	วิธีทดสอบ (Test Method)
<p>สาขาสิ่งแวดล้อม (Environmental field)</p> <p>4. บรรยากาศ (Ambient)</p>	<p>- ระดับเสียง (Sound Level)</p> <ul style="list-style-type: none"> • ระดับเสียงเฉลี่ย LeqT ช่วง 30.0 - 130.0 dB(A) • ระดับเสียงสูงสุด Lmax ช่วง 30.0 - 130.0 dB(A) 	<p>- ISO 1996 - 1 : 2016</p> <p>- ประกาศคณะกรรมการสิ่งแวดล้อมแห่งชาติ ฉบับที่ 15 (2540) เรื่องกำหนด มาตรฐาน ระดับเสียงโดยทั่วไป ลงวันที่ 12 มี.ค. 2540 (Notification of The National Environmental Board Volume 15 B.E. 2540 (1997) on the general noise level standards, dated March 12, 1997)</p> <p>- ประกาศกรมควบคุมมลพิษ เรื่อง การ คำนวณค่าระดับเสียง ลงวันที่ 11 ส.ค. 2540 (Notification of the Pollution Control Department on the calculation of the noise level, dated August 11, 1997.)</p> <p>- ประกาศกรมโรงงานอุตสาหกรรม เรื่อง วิธีการตรวจวัดระดับเสียงการรบกวน ระดับ เสียงเฉลี่ย 24 ชั่วโมง และระดับเสียงสูงสุดที่ เกิดจากการประกอบกิจการโรงงาน พ.ศ. 2553 ลงวันที่ 20 ธ.ค. 2553 (Notification of the Department of Industrial Works on Methods for Measuring Noise Annoyance, Noise Levels 24-Hour Average and Maximum Noise Level from Factory B.E. 2553, dated December 20, 2010.)</p>

ภาคผนวกที่ 4

สรุปเอกสารการสอบเทียบอุปกรณ์เครื่องมือ

การสอบเทียบเครื่องมือหลักที่ใช้ในการตรวจวัดตามมาตรฐานตรวจสอบคุณภาพสิ่งแวดล้อม (กรกฎาคม-ธันวาคม 2567)

ชนิดของมลพิษ	รายการทดสอบ	วิธีทดสอบ	เครื่องมือ	รุ่น	หมายเลขเครื่องมือ	ความถี่ในการสอบเทียบ	การสอบเทียบครั้งล่าสุด	ผลการสอบเทียบ
ปล่อยระบาย	1. NO ₂	- Chemical Absorption, Colorimetric	1. Spectrophotometer	UV-1800	A11635101643	1 ครั้ง / ปี (EC)	22 เม.ย. 67	PASS
	2. SO ₂	- Absorption Barium Thorin Titrimetric	1. Certified Glass ware	-	-	10 % Glass ware Class A	-	PASS
	3. TSP	- Isokinetic, Gravimetric	1. Analytical Balance	XS205DU	B344940005	1 ครั้ง / ปี (EC)	9 ธ.ค. 67	PASS
			2. Hot air oven	UFE 500	g.511.0182	1 ครั้ง / ปี (EC)	19 ธ.ค. 67	PASS
			3. Dry Gas Meter	XC-572V	0504003	1 ครั้ง / ปี (EC)	22 เม.ย. 67	PASS
	4. H ₂ SO ₄	- Isokinetic, Titrimetric	1. Certified Glass ware	-	-	10 % Glass ware Class A	-	PASS
	5. Zn	- Isokinetic-ICP-AES	1. Atomic Absorption Spectrophotometer (AAS)	PinAAcle 900F	PFBS22080801	1 ครั้ง / ปี (ES)	25 เม.ย. 67	PASS
คุณภาพอากาศ ในบรรยากาศ	1. TSP	- Gravimetric	1. Analytical Balance	XS205DU	B344940005	1 ครั้ง / ปี (EC)	9 ธ.ค. 67	PASS
			2. Hot air oven	UFE 500	g.511.0182	1 ครั้ง / ปี (EC)	19 ธ.ค. 67	PASS
			3. High Volume	-	-	on site cal.	-	-
	2. SO ₂	UV Fluorescence Method	1. SO ₂ Analyzer	API./M100E	3220	1 ครั้ง / ปี (IC)	12 ม.ค. 67	PASS
			2. SO ₂ Analyzer	API./M100E	640	1 ครั้ง / ปี (IC)	13 ม.ค. 67	PASS
			3. SO ₂ Analyzer	API./M100E	603	1 ครั้ง / ปี (IC)	9 ม.ค. 67	PASS
			Standard SO ₂ gas	EPA Protocol	CC159599	ตามอายุแก๊ส	-	PASS
	3. NO ₂	Chemiluminescence Method	1. NO ₂ Analyzer	API./T200	7355	1 ครั้ง / ปี (IC)	24 ม.ค. 67	PASS
			2. NO ₂ Analyzer	API./T200	6756	1 ครั้ง / ปี (IC)	24 ม.ค. 67	PASS
			3. NO ₂ Analyzer	API./M200E	3999	1 ครั้ง / ปี (IC)	16 ม.ก. 68	PASS
			4. NO ₂ Analyzer	API./T200	7874	1 ครั้ง / ปี (IC)	24 ม.ค. 67	PASS
			5. NO ₂ Analyzer	API./M200E	4084	1 ครั้ง / ปี (IC)	21 ม.ค. 67	PASS
			6. NO ₂ Analyzer	API./T200	6756	1 ครั้ง / ปี (IC)	24 ม.ค. 67	PASS
			7. NO ₂ Analyzer	API./T200	2004	1 ครั้ง / ปี (IC)	24 ม.ค. 67	PASS
			Standard Nox ₂ gas	EPA Protocol	CC159599	ตามอายุแก๊ส	-	PASS
	4. Zn	1. Atomic Absorption Spectrophotometer (AAS)	Spectr AA -240FS	Prodigy 7	P70177	1 ครั้ง / ปี (ES)	13 พ.ค. 67	PASS
		2. High Volume	-	-	on site cal.	-	-	-

การสอบเทียบเครื่องมือหลักที่ใช้ในการตรวจวัดตามมาตรการติดตามตรวจสอบคุณภาพสิ่งแวดล้อม (กรกฎาคม-ธันวาคม 2567)

ชนิดของมลพิษ	รายการทดสอบ	วิธีทดสอบ	เครื่องมือ	รุ่น	หมายเลขเครื่องมือ	ความถี่ในการสอบเทียบ	การสอบเทียบครั้งล่าสุด	ผลการสอบเทียบ
คุณภาพน้ำ	1. COD	- Close Reflux, Titrimetric	1. Analytical Balance	XS205DU	1126323724	1 ครั้ง / ปี (EC)	9 ธ.ค. 67	PASS
	2. Oil & Grease	- Partition Gravimetric	2. Hot air oven	UF110	B418.1243	1 ครั้ง / ปี (EC)	19 ธ.ค. 67	PASS
	3. TSS	- Dried at 103-105 °C	3. Standard Weight	Class F1	-	1 ครั้ง / 3 ปี (EC)	3 มิ.ย. 67	PASS
	4. Cu	- Direct Aspiration –AAS	1. Inductively Couple Plasma (ICP) หรือ	Prodigy 7	P70177	1 ครั้ง / ปี (ES)	13 พ.ค. 67	PASS
	5. Ni		2. Atomic Absorption	Spectr AA -240FS	EL107053792	1 ครั้ง / ปี (IC)	25 เม.ย. 67	PASS
	6. Zn	- Inductively Couple Plasma	3. Barometer	Barigo	BM001/41	1 ครั้ง / 1 ปี (EC)	13 พ.ค. 67	PASS
			4. Termo & Hygrometer	608-HI	45102164	1 ปี/ครั้ง (EC)	25 เม.ย. 67	PASS
	7. pH	- Electrometric	1. pH Meter	SevenCompact S220	B835349235	1 ครั้ง / ปี (EC)	5 ก.พ. 67	PASS
ระดับเสียงโดยทั่วไป	1. Leq 24 hr.	- Integrated Sound Level Meter	1.Acoustic Calibrator	NC-75	34302326	1 ครั้ง / ปี (EC)	13 พ.ค. 67	PASS
	2. Leq 24 hr.	- Integrated Sound Level Meter	1.Acoustic Calibrator	NC-75	34802645	1 ครั้ง / ปี (EC)	26 ก.ย. 67	PASS
ระดับเสียงในพื้นที่ทำงาน	1. Leq 8 hr.	- Integrated Sound Level Meter	1.Acoustic Calibrator	NC-75	34802645	1 ครั้ง / ปี (EC)	26 ก.ย. 67	PASS
	2. Leq 8 hr.	- Integrated Sound Level Meter	1.Acoustic Calibrator	NC-75	34302326	1 ครั้ง / ปี (EC)	13 พ.ค. 67	PASS
คุณภาพอากาศ ในพื้นที่ทำงาน	1. H ₂ SO ₄	- Impingment Absorption, Spectrometric	1. Spectrophotometer	UV-1800	A11635101643	1 ครั้ง / ปี (EC)	22 เม.ย. 67	PASS
			2. Personal air sample pump (Rotameter)	SKC / No.4-6	-	1 ครั้ง / ปี (IC)	30 ม.ค. 67	PASS
	2. HNO ₃	- Ion Chromatography	1. Spectrophotometer	UV-1800	A11635101643	1 ครั้ง / ปี (EC)	22 เม.ย. 67	PASS
			2. Personal air sample pump (Rotameter)	SKC / No.4-6	-	1 ครั้ง / ปี (IC)	30 ม.ค. 67	PASS
	3. Zn	- Filtration, ICP-AES	1.Inductively Couple Plasma (ICP)	Prodigy 7	P70177	1 ครั้ง / ปี (ES)	13 พ.ค. 67	PASS
			2. High Volume	-	-	on site cal.	-	-
	4. Heat Stress	- WBGT	1. Certified Thermometer	0-100 °C	TPH060001	1 ครั้ง / ปี (EC)	3 เม.ย. 67	PASS

Remark : EC = External Calibration (สอบเทียบ โดย หน่วยงานภายนอก)
 IC = Internal Calibration (สอบเทียบ โดย หน่วยงานภายใน)
 ES = External Service (บำรุงรักษา โดย หน่วยงานภายนอก)
 พารามิเตอร์อื่นที่ไม่ได้กล่าวถึงบางพารามิเตอร์เป็นงานทดสอบพื้นฐานที่ใช้อุปกรณ์เครื่องแก้วและ/หรือมีการสอบเทียบภายในก่อนการใช้งานในขั้นตอนการทำงานเป็นการเฉพาะ

ภาคผนวกที่ 5

เอกสาร Detection Limit ของรายการทดสอบ

Rev.3 วันที่ 21/6/2024 แก้ไข Detection Limit ของโลหะหนักโดยรายงานหน่วย mg/m3 ทุกพารามิเตอร์เพื่อให้สอดคล้อง กับมาตรฐาน

การตรวจวิเคราะห์คุณภาพอากาศ (Air Quality Analysis)

ประเภทตัวอย่าง : อากาศในบริเวณการทำงาน - Workplace Air Quality)									
Items	Parameter	Sampling/Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
	แผนปฏิบัติการภาคสนาม								
1	Illumination	Lux Meter	JIS C 1906 / Lux meter		-	0-5000	lux	-	
2	Sound (Leq, Lmin, Lmax, Ldn, Lp)	Integrated Sound Level Method	ISO 11202 / Sound Level Meter		-	40 - 140	dB (A)	1	
3	Noise Octave band	Integrated Sound Level Method	AS/NZS 4476 1997 / Sound Level Meter		-	40 – 140	dB (A)	1	1/3 Octave band หรือ 1/1 Octave band
4	Noise dose	Integrated Sound Level Method	BS6402 / Noise Dosemeter		-	0 - 9999	% Dose	2	
5	Carbon Monoxide (CO)	Non-Dispersive Infrared Photometric Method	U.S. EPA 10 (P.1-5)/ Carbon Monoxide Analyzer		-	0.1 - 100	ppm	1	
6	Ozone (O ₃)	UV Fluorescence Method	U.S. EPA method / Ozone Analyzer		-	0.1 - 100	ppm	2	
7	Heat Stress	WBGT Method	ACGIH / Grove + DI + Thermometer / calculation	-	-	0 - 100	oC	2	
	ส่วนงานทดสอบพื้นฐาน								
1	Total Dust (TD)	Filtration, Gravimetric Method	NIOSH 0500 (P.1-3) / PS pump / Gravimetric	7-133 L	2 L/min (1 hr)	0.8	mg / m ³	1	SKC Cat No. 225-8-01
2	Respirable Dust (RD)	Cyclone - Filtration, Gravimetric Method	NIOSH 0600 (P.1-3) / PS pump cyclone / Gravimetric	20-400 L	1.70 L/min (1 hr)	0.5	mg / m ³	1	SKC Cat No. 225-8-01
3	NaOH	Acid-Base Titrimetric Method	NIOSH 7401(P.1-4) / PS pump / Titration	70-1000 L	1-4 L/min	0.4	mg / m ³	1	SKC Cat No. 225-17-01
4	KOH	Acid-Base Titrimetric Method	NIOSH 7401(P.1-4) / PS pump / Titration	70-1000 L	1-4 L/min	0.6	mg / m ³	1	SKC Cat No. 225-17-01
5	LiOH	Acid-Base Titrimetric Method	NIOSH 7401(P.1-4) / PS pump / Titration	70-1000 L	1-4 L/min	0.2	mg / m ³	1	SKC Cat No. 225-17-01
	ส่วนงานเครื่องมือทดสอบ								
1	Ammonia	Impingement Absorption - Colorimetric Method	Modified NIOSH 6015(P.1-7) / Spectrophotometer	0.1-96 L	1 L/min (1 hr)	0.01	mg / m ³	2	
2	Nitrogen Dioxide	Impingement Absorption, Spectrophotometer Method	APHA 817(P.1-3) / Spectrophotometer	7.5 – 10 L	0.5 L/min (15-20 min)	0.01	ppm	2	
3	Sulfur Dioxide	Impingement Absorption, Titrimetric Method	APHA 823(P.1-3) / Titration	26 L	0.21 L/min (2 hrs)	0.30 0.11	mg / m ³ ppm	2	
4	P,P'-diphenylmethane (MDI)	Impingement Absorption, Spectrophotometer Method	APHA 831(P.1-3) / Spectrophotometer	20 L	1 L/min (20 min)	0.002	ppm	2	
5	Aluminum (Al)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-100 L	2 L/min (1 hr)	0.004	mg / m ³	3	SKC Cat No. 225-5

Items	Parameter	Sampling/Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
6	Antimony (Sb)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	50-2000 L	2 L/min (1 hr)	0.021	mg / m ³	3	SKC Cat No. 225-5
7	Arsenic & Compound (as As)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-2000 L	2 L/min (1 hr)	0.010	mg / m ³	3	SKC Cat No. 225-5
8	Barium (Ba)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	50-2000 L	2 L/min (1 hr)	0.004	mg / m ³	3	SKC Cat No. 225-5
9	Cadmium & Compounds (as Cd)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	25-1500 L	2 L/min (1 hr)	0.004	mg / m ³	3	SKC Cat No. 225-5
10	Calcium & Compounds (as Ca)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	20-400 L	2 L/min (1 hr)	0.208	mg / m ³	3	SKC Cat No. 225-5
11	Chromium & Compounds (as Cr)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-1000 L	2 L/min (1 hr)	0.004	mg / m ³	3	SKC Cat No. 225-5
12	Copper (Cu) (Dust & Fume)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	50-1500 L	2 L/min (1 hr)	0.004	mg / m ³	3	SKC Cat No. 225-5
13	Iron & Compounds (as Fe)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-1000 L	2 L/min (1 hr)	0.004	mg / m ³	3	SKC Cat No. 225-5
14	Lead (Pb)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	50-2000 L	2 L/min (1 hr)	0.004	mg / m ³	3	SKC Cat No. 225-5
15	Magnesium (Mg)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	6-67 L	2 L/min (1 hr)	0.208	mg / m ³	3	SKC Cat No. 225-5
16	Manganese (Mn)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-200 L	2 L/min (1 hr)	0.004	mg / m ³	3	SKC Cat No. 225-5
17	Mercury (Hg)	Filtration - AAS Method	NIOSH 6009(P.1-5) / PS pump / AAS	2 – 100 L	0.2 L/min (1 hr)	0.00002	mg / m ³	5	SKC Cat No. 225-5
18	Nickel & Compounds (as Ni)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-1000 L	2 L/min (1 hr)	0.004	mg / m ³	3	SKC Cat No. 225-5
19	Selenium (Se)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	13-2000 L	2 L/min (1 hr)	0.021	mg / m ³	3	SKC Cat No. 225-5
20	Silver (Ag)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	250-2000 L	2 L/min (2-17 hr)	0.010	mg / m ³	3	SKC Cat No. 225-5
21	Sodium (Na)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	13-2000 L	2 L/min (1 hr)	0.208	mg / m ³	3	SKC Cat No. 225-5
22	Tin (Sn)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-1000 L	2 L/min (1 hr)	0.021	mg / m ³	3	SKC Cat No. 225-5

Items	Parameter	Sampling/Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
23	Titanium (Ti)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-1000 L	2 L/min (1 hr)	0.004	mg / m ³	3	SKC Cat No. 225-5
24	Vanadium (V)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-2000 L	2 L/min (1 hr)	0.004	mg / m ³	3	SKC Cat No. 225-5
25	Zinc & Compounds (Zn)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-2000 L	2 L/min (1 hr)	0.004	mg / m ³	3	SKC Cat No. 225-5
26	Acetone	Sorbent Adsorption, GC Method	NIOSH 1300 (P.1-5) / PS pump / GC-FID	0.5-3 L	0.10 L/min (30 min)	13.17 5.54	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
27	Benzene	Sorbent Adsorption, GC Method	NIOSH 1501(P.1-7) / PS pump / GC-FID	5-30 L	0.10 L/min (1 hr)	2.93 0.92	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
28	Cyclohexanone	Sorbent Adsorption, GC Method	NIOSH 1300(P.1-5) / PS pump / GC-FID	1-10 L	0.10 L/min (1 hr)	3.96 0.99	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
29	Ethanol (Ethyl alcohol)	Sorbent Adsorption, GC Method	NIOSH 1400(P.1-4) / PS pump / GC-FID	12 L	0.10 L/min (1 hr)	3.29 1.75	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
30	Ethylacetate	Sorbent Adsorption, GC Method	NIOSH 1457 (P.1-4) / PS pump / GC-FID	0.1-10 L	0.10 L/min (1 hr)	7.21 2.00	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
31	Ethylbenzene	Sorbent Adsorption, GC Method	NIOSH 1501 (P.1-7) / PS pump / GC-FID	1-24 L	0.10 L/min (1 hr)	3.63 0.83	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
32	Hexane	Sorbent Adsorption, GC Method	NIOSH 1500(P.1-8) / PS pump / GC-FID	4 L	0.10 L/min (1 hr)	7.05 2.00	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
33	Isopropanol (Isopropyl alcohol) ; IPA	Sorbent Adsorption, GC Method	NIOSH 1400(P.1-4) / PS pump / GC-FID	12 L	0.10 L/min (1 hr)	3.28 1.33	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
34	Methanol (Methyl alcohol)	Sorbent Adsorption, GC Method	OSHA 91(P.1-10) / PS pump / GC-FID	1-5 L	0.10 L/min (30 min)	3.96 3.02	mg / m ³ ppm	2	SKC Cat. No. ST 226-82
35	Methyl Ethyl Ketone (MEK)	Sorbent Adsorption, GC Method	OSHA 1004(P.1-27) / PS pump / GC-FID	0.25-12L	0.10 L/min (1 hr)	3.35 1.14	mg / m ³ ppm	2	SKC Cat. No. ST 226-81A
36	Methyl Isobutyl Ketone (MIBK)	Sorbent Adsorption, GC Method	OSHA 1004(P.1-27) / PS pump / GC-FID	0.25-12L	0.10 L/min (1 hr)	3.34 0.81	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
37	Styrene	Sorbent Adsorption, GC Method	NIOSH 1501 (P.1-7) / PS pump / GC-FID	1-24 L	0.10 L/min (1 hr)	3.78 0.89	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
38	Toluene	Sorbent Adsorption, GC Method	NIOSH 1501 (P.1-7) / PS pump / GC-FID	1-8 L	0.10 L/min (1 hr)	3.63 0.96	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
39	Xylene	Sorbent Adsorption, GC Method	NIOSH 1501 (P.1-7) / PS pump / GC-FID	2-23 L	0.10 L/min (1 hr)	3.58 0.83	mg / m ³ ppm	2	SKC Cat. No. ST 226-01

Items	Parameter	Sampling/Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
40	Cumene	Sorbent Adsorption, GC Method	NIOSH 1501 (P.1-7) / PS pump / GC-FID	2-23 L	0.10 L/min (1 hr)	3.60 0.73	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
41	Methylcyclohexane	Sorbent Adsorption, GC Method	NIOSH 1500 (P.1-8) / PS pump / GC-FID	2-23 L	0.10 L/min (1 hr)	7.23 1.80	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
42	Methyl acetate	Sorbent Adsorption, GC Method	NIOSH 1458 (P.1-8) / PS pump / GC-FID	0.2-10 L	0.10 L/min (1 hr)	9.09 3.00	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
43	Diethyl Ether or Ethyl Ether	Sorbent Adsorption, GC Method	NIOSH 1610 (P.1-4) / PS pump / GC-FID	0.25-3 L	0.01-0.20 L/min (1 hr)	11.88 3.92	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
44	Methyl tert-Butyl Ether (MTBE)	Sorbent Adsorption, GC Method	NIOSH 1615 (P.1-4) / PS pump / GC-FID	2-96 L	0.01-0.20 L/min (1 hr)	3.08 0.86	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
45	Dichloromethane or Methylene chloride	Sorbent Adsorption, GC Method	NIOSH 1005 (P.1-4) / PS pump / GC-FID	0.5-2.5 L	0.01-0.20 L/min (1 hr)	22.1 6.36	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
46	1-Butanol /n-butyl alcohol	Sorbent Adsorption, GC Method	NIOSH 1401 (P.1-4) / PS pump / GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	4.86 1.60	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
47	2-Butanol /sec-butyl alcohol	Sorbent Adsorption, GC Method	NIOSH 1401 (P.1-4) / PS pump / GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	4.86 1.60	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
48	Isobutyl alcohol (IBA)	Sorbent Adsorption, GC Method	NIOSH 1401 (P.1-4) / PS pump / GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	4.81 1.59	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
49	Beryllium (Be)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	1250-2000 L	2 L/min (1 hr)	0.004	mg / m ³	3	SKC Cat No. 225-5
50	Cobalt (Co)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	25-2000 L	2 L/min (1 hr)	0.004	mg / m ³	3	SKC Cat No. 225-5
51	Molybdenum (Mo)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-67 L	2 L/min (1 hr)	0.004	mg / m ³	3	SKC Cat No. 225-5
52	Thallium (Tl)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	25-2000 L	2 L/min (1 hr)	0.021	mg / m ³	3	SKC Cat No. 225-5
53	Silicon (Si)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-1000 L	2 L/min (1 hr)	0.010	mg / m ³	3	SKC Cat No. 225-5
54	Potassium (K)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-1000 L	2 L/min (1 hr)	0.208	mg / m ³	3	SKC Cat No. 225-5
55	Ketones	Sorbent Adsorption, GC Method	NIOSH 2555 (P.1-5) / PS pump / GC-FID	0.5-3.0 L	0.01-0.20 L/min (1 hr)	13.17 5.54	mg / m ³ ppm	2	SKC Cat. No. 226-01
56	n-Heptane	Sorbent Adsorption, GC Method	NIOSH 1500 (P.1-8) / PS pump / GC-FID	-	0.01-0.20 L/min (1 hr)	6.97 1.70	mg / m ³ ppm	2	SKC Cat. No. 226-01

Items	Parameter	Sampling/Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
57	n-Butyl acetate	Sorbent Adsorption, GC Method	NIOSH 1450(P.1-6) / PS pump / GC-FID	1-10 L	0.01-0.20 L/min (1 hr)	8.55 1.80	mg / m ³ ppm	2	SKC Cat. No. 226-01
58	n-Pentane	Sorbent Adsorption, GC Method	NIOSH 1500(P.1-8) / PS pump / GC-FID	-	0.01-0.20 L/min (1 hr)	2.63 0.89	mg / m ³ ppm	2	SKC Cat. No. 226-01
59	Chloroform	Sorbent Adsorption, GC Method	NIOSH 1003 (P.1-7) / PS pump / GC-FID	1-50 L	0.01-0.20 L/min (1 hr)	4.93 1.01	mg / m ³ ppm	2	SKC Cat. No. 226-01
60	Chlorobenzene	Sorbent Adsorption, GC Method	NIOSH 1003 (P.1-7) / PS pump / GC-FID	1.5-40L	0.01-0.20 L/min (1 hr)	4.63 1.00	mg / m ³ ppm	2	SKC Cat. No. 226-01
61	Formaldehyde	Sorbent Adsorption, GC Method	NIOSH 2541 (P.1-5) / PS pump / GC-FID	1-36L	0.01-0.10 L/min (1 hr)	0.12 0.10	mg / m ³ ppm	2	SKC Cat. No. 226-118 เปลี่ยน DL:1/2/24
62	Hydrogen chloride	Sorbent Adsorption, IC Method	OSHA ID-174SG / PS pump / IC	100 L	0.5 L/min (15 min)	0.015 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03
63	Hydrogen Bromide	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC	96 L	0.2 L/min (60min)	0.033 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03
64	Sulfuric Acid	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC	96 L	0.2 L/min (60min)	0.040 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03
65	Phosphoric Acid	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC	96 L	0.2 L/min (60min)	0.040 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03
66	Ammonia (NH ₃)	Sorbent Adsorption, IC Method	NIOSH 6016 / PS pump / IC	0.10 - 96 L	0.2 L/min (120min)	0.200 0.280	mg / m ³ ppm	3	SKC Cat. No. 226-10-06
67	Nitric	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC	96 L	0.2 L/min (60min)	0.026 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03
68	Chlorine	Sorbent Adsorption, IC Method	OSHA ID-202 / PS pump / IC	60 L	0.5 L/min (60min)	0.029 0.010	mg / m ³ ppm	3	0.02% KI in Buffer
69	Hydrogen fluoride	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC	96 L	0.2 L/min (60min)	0.008 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03
70	Phosphorus (P)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-1000 L	2 L/min (1 hr)	0.042	mg / m ³	3	SKC Cat No. 225-5
71	Boron (B)	Filtration, ICP-OES Method	NIOSH 7300(P.1-8) / PS pump / ICP-OES	5-1000 L	2 L/min (1 hr)	0.010	mg / m ³	3	SKC Cat No. 225-5
72	Sulfur dioxide	Filtration, IC Method	NIOSH 6004 / PS pump / IC	4-200 L	1 L/min (120min)	0.015 0.006	mg / m ³ ppm	3	Treated Filter
73	Sulfuric Acid	Filtration, IC Method	NIOSH 7908 / PS pump / IC	15-2000 L	1 L/min (120min)	0.040 0.010	mg / m ³ ppm	3	Fiter (PTFE)

Items	Parameter	Sampling/Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
74	Phosphoric Acid	Filtration, IC Method	NIOSH 7908 / PS pump / IC	15-2000 L	1 L/min (120min)	0.040 0.010	mg / m ³ ppm	3	Fiter (PTFE)

เอกสารอ้างอิง

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4. OSHA Analytical Methods Manual, 2nd Edition, U.S. Department of Labor, 1992
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6. Compendium of Methods for Determination of Inorganic Compound in Ambient Air, U.S. EPA. , 1999
7. Annual Book of ASTM Standard, Section 11, 2001

การตรวจวิเคราะห์คุณภาพอากาศ (Air Quality Analysis)

(ประเภทตัวอย่าง : อากาศในบรรยากาศโดยทั่วไป - Ambient Air Quality)									
Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
แผนปฏิบัติการภาคสนาม									
1	Sulfur Dioxide (SO ₂)	UV Fluorescence Method	U.S. EPA EQSA-0292-084 / Sulfur Dioxide Analyzer	-	24 hrs (1 hr avg.)	0.001 - 10	ppm	3	
2	Nitrogen Dioxide (NO ₂)	Chemiluminescence Method	U.S. EPA RFCA-0995-108 / Nitrogen Dioxide Analyzer	-	24 hrs (1 hr avg.)	0.001 - 10	ppm	3	
3	Carbon Monoxide (CO)	Non-Dispersive Infrared Photometric Method	U.S. EPA 40 CFR Part 50 Appendix C / Carbon Monoxide	-	24 hrs (8 hr avg.)	0.1 - 100	ppm	1	
4	Ozone (O ₃)	UV Fluorescence Method	U.S. EPA 40 CFR Part 50 Appendix D / Ozone Analyzer	-	24 hrs (1 hr avg.)	0.001 - 10	ppm	3	
5	Sound (Leq, Lmin, Lmax, Ldn, Lp)	Integrated Sound Level Method	ISO 1996-1 / Sound Level meter	-	24 hrs (1 hr avg.)	40 - 140	dB (A)	1	
6	Wind Speed & Wind Direction	Wind Speed & Wind Direction Sensor	ASTM D 4480-93 / WS/WD Equipment	-	-	-	-	-	Wind speed & Wind
ส่วนงานทดสอบพื้นฐาน									
1	Total Particulate Matter (TSP)	Gravimetric Method	U.S. EPA Method Part 50 / Gravimetric Method	-	-	-	mg / m ³ ppm	2	
2	PM10	Gravimetric Method	U.S. EPA Method Part 50 / Gravimetric Method	-	-	-	mg / m ³ ppm	2	
3	PM2.5	Gravimetric Method	U.S. EPA Method Part 50 / Gravimetric Method	-	-	200	mg / m ³	-	
ส่วนงานเครื่องมือทดสอบ									
1	Ammonia (NH ₃)	Impingement Absorption, Colorimetric Method	APHA 401 / Spectrophotometer	288 L	0.2 L/min (24 hrs)	0.01	mg / m ³	2	
2	Sulfur Dioxide (SO ₂)	Pararosaniline Method	U.S. EPA 40 CFR Part 50 Appendix A / Spectrophotometer	288 L	0.2 L/min (24 hrs)	0.01	mg / m3	2	

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
3	Aluminium (Al)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
4	Antimony (Sb)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
5	Arsenic (As)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
6	Barium (Ba)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
7	Cadmium (Cd)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
8	Calcium (Ca)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
9	Chromium (Cr)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
10	Copper (Cu)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
11	Iron (Fe)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
12	Lead (Pb)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
13	Magnesium (Mg)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
14	Manganese (Mn)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
15	Mercury (Hg)	Filtration, AAS Method	U.S. EPA Method IO-3.4 / High Volume - AAS	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
16	Nickel (Ni)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
17	Potassium (K)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
18	Sodium (Na)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
19	Tin (Sn)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
20	Titanium (Ti)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
21	Vanadium (V)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
22	Zinc (Zn)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
23	Selenium (Se)	Filtration, ICP-OES Method	U.S. EPA Method IO-3.4 / High Volume - ICP-OES	1,590 – 2,447 m ³	39-60 ft ³ /min (24 hrs)	0.0001	mg / m ³	4	Advantage MFS Cat. No. GA55 8 x 10 "
24	Acetone	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.14 0.06	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
25	Benzene	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.12 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-02
26	Cyclohexanone	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.16 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-04
27	Ethanol (Ethyl alcohol)	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	288 L	0.10 L/min (24 hrs)	0.14 0.07	mg / m ³ ppm	2	SKC Cat. No. ST 226-05
28	Ethylacetate	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.32 0.09	mg / m ³ ppm	2	SKC Cat. No. ST 226-06
29	Ethylbenzene	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.15 0.03	mg / m ³ ppm	2	SKC Cat. No. ST 226-07
30	Hexane	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.32 0.09	mg / m ³ ppm	2	SKC Cat. No. ST 226-08
31	Isopropanol (Isopropyl alcohol) ; IPA	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	288 L	0.10 L/min (24 hrs)	0.14 0.06	mg / m ³ ppm	2	SKC Cat. No. ST 226-09
32	Methanol (Methyl alcohol)	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.07 0.05	mg / m ³ ppm	2	SKC Cat. No. ST 226-10
33	Methyl Ethyl Ketone (MEK)	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.14 0.05	mg / m ³ ppm	2	SKC Cat. No. ST 226-11
34	Styrene	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.16 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-12
35	Toluene	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.15 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-13
36	Xylene	Sorbent Adsorption, GC Method	ASTM D 3687-95 / GC-FID	144 L	0.10 L/min (24 hrs)	0.15 0.03	mg / m ³ ppm	2	SKC Cat. No. ST 226-14
37	Methylcyclohexane	Sorbent Adsorption, GC Method	NIOSH 1500 (P.1-8) / PS pump / GC-FID	2-23 L	0.10 L/min (1 hr)	0.32 0.08	mg / m ³ ppm	2	SKC Cat. No. ST 226-01

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
38	Methyl acetate	Sorbent Adsorption, GC Method	NIOSH 1458 (P.1-8) / PS pump / GC-FID	0.2-10 L	0.10 L/min (1 hr)	0.61 0.20	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
39	Diethyl Ether or Ethyl Ether	Sorbent Adsorption, GC Method	NIOSH 1610 (P.1-4) / PS pump / GC-FID	0.25-3 L	0.01-0.20 L/min (1 hr)	0.12 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
40	Methyl tert-Butyl Ether (MTBE)	Sorbent Adsorption, GC Method	NIOSH 1615 (P.1-4) / PS pump / GC-FID	2-96 L	0.01-0.20 L/min (1 hr)	0.13 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
41	Dichloromethane	Sorbent Adsorption, GC Method	NIOSH 1005 (P.1-4) / PS pump / GC-FID	0.5-2.5 L	0.01-0.20 L/min (1 hr)	0.23 0.07	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
42	1-Butanol /n-butyl alcohol	Sorbent Adsorption, GC Method	NIOSH 1401 (P.1-4) / PS pump / GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	0.17 0.06	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
43	2-Butanol /sec-butyl alcohol	Sorbent Adsorption, GC Method	NIOSH 1401 (P.1-4) / PS pump / GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	0.17 0.06	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
44	Isobutyl alcohol (IBA)	Sorbent Adsorption, GC Method	NIOSH 1401 (P.1-4) / PS pump / GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	0.17 0.06	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
45	Methyl Isobutyl Ketone (MIBK)	Sorbent Adsorption, GC Method	OSHA 1004(P.1-27) / PS pump / GC-FID	0.25-12L	0.10 L/min (1 hr)	0.14 0.03	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
46	Ketones	Sorbent Adsorption, GC Method	NIOSH 2555 (P.1-5) / PS pump / GC-FID	0.5-10L	0.01-0.20 L/min (1 hr)	0.14 0.06	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
47	n-Butyl acetate	Sorbent Adsorption, GC Method	NIOSH 1450 (P.1-6) / PS pump / GC-FID	1-10L	0.01-0.20 L/min (1 hr)	0.38 0.08	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
48	n-Pentane	Sorbent Adsorption, GC Method	NIOSH 1500 (P.1-8) / PS pump / GC-FID	-	0.01-0.20 L/min (1 hr)	0.11 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
49	Chloroform	Sorbent Adsorption, GC Method	NIOSH 1003 (P.1-7) / PS pump / GC-FID	1-50L	0.01-0.20 L/min (1 hr)	0.21 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
50	Chlorobenzene	Sorbent Adsorption, GC Method	NIOSH 1003 (P.1-7) / PS pump / GC-FID	1.5-40L	0.01-0.20 L/min (1 hr)	0.19 0.04	mg / m ³ ppm	2	SKC Cat. No. ST 226-01
51	Formaldehyde	Sorbent Adsorption, GC Method	NIOSH 2541 (P.1-5) / PS pump / GC-FID	1-36L	0.01-0.10 L/min (1 hr)	0.01 0.01	mg / m ³ ppm	2	SKC Cat. No. 226-118
52	Hydrogen chloric	Sorbent Adsorption, IC Method	OSHA ID-174SG / PS pump / IC	1-7.5 L	0.20 L/min (24 hr)	0.015 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03
53	Hydrogen Bromide	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC	1-96 L	0.20 L/min (24 hr)	0.033 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03
54	Sulfuric Acid	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC NIOSH 7908 / PS pump / IC	1-96 L	0.20 L/min (24 hr)	0.040 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03 Fiter (PTFE)

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
55	Phosphoric Acid	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC NIOSH 7908 / PS pump / IC	1-96 L	0.20 L/min (24 hr)	0.040 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03 Fiter (PTFE)
56	Nitric	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC	1-96 L	0.20 L/min (24 hr)	0.026 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03
57	Chlorine	Sorbent Adsorption, IC Method	OSHA ID-202 / PS pump / IC	14 L	0.20 L/min (24 hr)	0.029 0.010	mg / m ³ ppm	3	0.02% KI in Buffer
58	Ammonia (NH ₃)	Sorbent Adsorption, IC Method	NIOSH 6016 / PS pump / IC	0.10 - 96 L	0.20 L/min (120min)	0.200 0.280	mg / m ³ ppm	3	SKC Cat. No. 226-10-06
59	Hydrogen fluoride	Sorbent Adsorption, IC Method	OSHA ID165SG / PS pump / IC	60 L	0.2 L/min (60min)	0.008 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03

การตรวจวิเคราะห์คุณภาพอากาศ (Air Quality Analysis)

ประเภทตัวอย่าง : อากาศในปล่องระบาย - Stack Air Quality

ตารางที่ 1 สรุปข้อกำหนดการเก็บตัวอย่างและความสามารถในการทดสอบตัวอย่างของห้องปฏิบัติการ ตามที่ขึ้นทะเบียนกับกรมโรงงานอุตสาหกรรม

(ประเภทตัวอย่าง : อากาศในปล่องระบาย - Stack Air Quality)

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
แผนปฏิบัติการภาคสนาม									
1	Smoke density (Opacity)	Ringelmann' s method	U.S. EPA Method 9 / Ringelmann' s Chart	-	-	-	%	2	
2	Oxide of Nitrogen	Chemilluminescence Method	U.S. EPA Method 7E / Nitrogen dioxide Analyzer	-	-	0.1 - 100	ppm	1	ใช้ Dilution Probe ร่วมในการตรวจวัด
3	Sulfur Dioxide	UV Fluorescence Method	U.S. EPA Method 6C / Sulfur dioxide Analyzer	-	-	0.4 - 100	ppm	1	ใช้ Dilution Probe ร่วมในการตรวจวัด
4	Carbon Monoxide	Bag,Non-Dispersive Infrared Method	U.S. EPA method 10 / Carbon monoxide analyzer	-	-	0.1 - 100	ppm	1	ใช้ Dilution Probe ร่วมในการตรวจวัด
ส่วนงานทดสอบพื้นฐาน									
1	Hydrogen Sulfide (H ₂ S)	Absorption, Iodometric Method	U.S. EPA Method 11 / Iodometric			8.0 6.0	mg / m ³ ppm	1	
2	Sulfur Dioxide (SO ₂)	Absorption Barium Thorin Titrimetric Method	U.S. EPA Method 6 / Titration	0.03 m ³	Isokinetic (30 min)	3.4 1.3	mg / m ³ ppm	1	
3	Sulfuric acid (H ₂ SO ₄)	Isokinetic, Barium Thorin Titrimetric Method	U.S. EPA Method 8 / Titration	0.9 m ³	Isokinetic (30 min)	0.05 0.01	mg / m ³ ppm	2	
4	Total Particulate Matter (TSP)	Isokinetic, Sampling / Gravimetric Method	U.S. EPA Method 5 / Gravimetric Method	-	-	0.1	mg / m ³	1	

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
	ส่วนงานเครื่องมือทดสอบ								
1	Oxide of Nitrogen (Nitrogen)	Chemical Absorption, Colorimetric Method	U.S. EPA Method 7 / Spectrophotometer	2.0 L	Non-Isokinetic (30 min)	2.0 1.0	mg / m ³ ppm	1	
2	Xylene	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	2.05 0.47	mg / m ³ ppm	2	SKC Cat. No. 226-09
3	Vanadium (V)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-OES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
4	Tin (Sn)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-OES	0.9 m ³	Isokinetic (30 min)	0.010	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
5	Selenium (Se)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-OES	0.9 m ³	Isokinetic (30 min)	0.010	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
6	Antimony (Sb)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.010	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
7	Arsenic (As)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.010	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
8	Cadmium (Cd)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
9	Chromium (Cr)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
10	Copper (Cu)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
11	Cobalt (Co)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
12	Lead and Inorganic Lead (Pb)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
13	Manganese (Mn)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
14	Nickel (Ni)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
15	Mercury (Hg)	Isokinetic, Sampling,Cold Vapor Technique-AAS Method	U.S. EPA Method 101 / AAS	0.053 m ³	Isokinetic (1.5 L/min)	0.0001	mg / m ³	4	Advantage MFS Cat No. GC5090 MM

การตรวจวิเคราะห์คุณภาพอากาศ (Air Quality Analysis)

(ประเภทตัวอย่าง : อากาศในปล่องระบาย - Stack Air Quality)

ตารางที่ 2 สรุปข้อกำหนดการเก็บตัวอย่างและความสามารถในการทดสอบตัวอย่างของห้องปฏิบัติการ ที่ไม่ได้ขึ้นทะเบียนกับกรมโรงงานอุตสาหกรรม

(ประเภทตัวอย่าง : อากาศในปล่องระบาย - Stack Air Quality)									
Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
	แผนปฏิบัติการภาคสนาม								
1	Sampling and Traverse point	U.S. EPA Recommend (Method 1)	U.S. EPA Method 1 / Calculation	-	-	-	-	-	
2	Velocity and Volumetric Flow rate		U.S. EPA Method 2 / Calculation	-	-	-	-	-	
3	Oxygen	Electrochemical Sensor	Modified U.S. EPA 3 / Electrochemical Sensor	-	-	0-20.9	%	1	
4	Moisture Content		U.S. EPA Method 4 / Calculation	-	-	-	-	2	
5	Carbon dioxide (CO ₂)	Electrochemical Sensor	Modified U.S. EPA 3 / Electrochemical Sensor	-	-	0-20.9	%	2	
	ส่วนงานทดสอบพื้นฐาน								
1	PM10,PM2.5	Isokinetic, Sampling / Gravimetric Method	U.S. EPA Method 201A / Gravimetric Method	-	-	0.1	mg / m ³	1	
	ส่วนงานเครื่องมือทดสอบ								
1	Aluminium (Al)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
2	Barium (Ba)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
3	Calcium (Ca)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.100	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
4	Iron (Fe)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
5	Magnesium (Mg)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.100	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
6	Beryllium (Be)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
7	Silver (Ag)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
8	Sodium (Na)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.100	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
9	Zinc (Zn)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
10	Acetone	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	1.88 0.79	mg / m ³ ppm	2	SKC Cat. No. 226-09
11	Benzene	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	1.68 0.52	mg / m ² ppm	2	SKC Cat. No. 226-09
12	Cyclohexanone	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	2.26 0.56	mg / m ² ppm	2	SKC Cat. No. 226-09
13	Ethanol (Ethyl alcohol)	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	1.88 1.00	mg / m ² ppm	2	SKC Cat. No. 226-09
14	Ethylbenzene	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	2.07 0.48	mg / m ² ppm	2	SKC Cat. No. 226-09
15	Ethylacetate	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	4.32 1.20	mg / m ² ppm	2	SKC Cat. No. 226-09
16	Hexane	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	4.23 1.20	mg / m ² ppm	2	SKC Cat. No. 226-09
17	Isopropanol (Isopropyl alcohol); IPA	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	1.87 0.76	mg / m ² ppm	2	SKC Cat. No. 226-09
18	Methanol (Methyl alcohol)	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	0.94 0.72	mg / m ² ppm	2	SKC Cat. No. 226-09
19	Methyl Ethyl Ketone (MEK)	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	1.92 0.65	mg / m ² ppm	2	SKC Cat. No. 226-09
20	Styrene	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	2.16 0.51	mg / m ² ppm	2	SKC Cat. No. 226-09
21	Toluene	Sorbent Adsorption, Gas Chromatography Method	US. EPA Method 18 / GC-FID	0.21 m ³	0.7 L/min (30 min)	2.07 0.55	mg / m ² ppm	2	SKC Cat. No. 226-09

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
22	Methylcyclohexane	Sorbent Adsorption, Gas Chromatography Method	U.S.EPA Method18/SKC.Guide/ GC-FID	2-23 L	0.10 L/min (1 hr)	4.02 1.00	mg / m ³ ppm	2	SKC Cat. No. ST 226-09
23	Diethyl Ether or Ethyl Ether	Sorbent Adsorption, Gas Chromatography Method	U.S.EPA Method18/SKC.Guide/ GC-FID	0.25-3 L	0.01-0.20 L/min (1 hr)	11.88 3.92	mg / m ³ ppm	2	SKC Cat. No. ST 226-09
24	Methyl tert-Butyl Ether (MTBE)	Sorbent Adsorption, Gas Chromatography Method	U.S.EPA Method18/SKC.Guide/ GC-FID	2-96 L	0.01-0.20 L/min (1 hr)	3.08 0.86	mg / m ³ ppm	2	SKC Cat. No. ST 226-09
25	Dichloromethane	Sorbent Adsorption, Gas Chromatography Method	U.S.EPA Method18/SKC.Guide/ GC-FID	0.5-2.5 L	0.01-0.20 L/min (1 hr)	3.16 0.91	mg / m ³ ppm	2	SKC Cat. No. ST 226-09
26	1-Butanol /n-butyl alcohol	Sorbent Adsorption, Gas Chromatography Method	U.S.EPA Method18/SKC.Guide/ GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	2.31 0.76	mg / m ³ ppm	2	SKC Cat. No. ST 226-09
27	2-Butanol /sec-butyl alcohol	Sorbent Adsorption, Gas Chromatography Method	U.S.EPA Method18/SKC.Guide/ GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	2.31 0.76	mg / m ³ ppm	2	SKC Cat. No. ST 226-09
28	Isobutyl alcohol (IBA)	Sorbent Adsorption, Gas Chromatography Method	U.S.EPA Method18/SKC.Guide/ GC-FID	2-10 L	0.01-0.20 L/min (1 hr)	2.29 0.76	mg / m ³ ppm	2	SKC Cat. No. ST 226-09
29	Thallium (Tl)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.010	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
30	Ketones	Sorbent Adsorption, Gas Chromatography Method	NIOSH2555 (P.1-5) / PS pump / GC-FID	21 L	0.70 L/min (1 hr)	1.88 0.79	mg / m ³ ppm	2	SKC Cat. No. 226-09
31	n-Heptane	Sorbent Adsorption, Gas Chromatography Method	NIOSH1500 (P.1-8) / PS pump / GC-FID	21 L	0.70 L/min (1 hr)	3.89 0.95	mg / m ³ ppm	2	SKC Cat. No. 226-09
32	n-Butyl acetate	Sorbent Adsorption, Gas Chromatography Method	NIOSH 1450(P.1-6) / PS pump / GC-FID	21 L	0.70 L/min (1 hr)	4.75 1.00	mg / m ³ ppm	2	SKC Cat. No. 226-09
33	n-Pentane	Sorbent Adsorption, Gas Chromatography Method	NIOSH 1500(P.1-8) / PS pump / GC-FID	21 L	0.70 L/min (1 hr)	1.50 0.51	mg / m ³ ppm	2	SKC Cat. No. 226-09
34	Chloroform	Sorbent Adsorption, Gas Chromatography Method	NIOSH1003 (P.1-7) / PS pump / GC-FID	21 L	0.70 L/min (1 hr)	2.82 0.58	mg / m ³ ppm	2	SKC Cat. No. 226-09
35	Chlorobenzene	Sorbent Adsorption, Gas Chromatography Method	NIOSH1003 (P.1-7) / PS pump / GC-FID	21 L	0.70 L/min (1 hr)	2.64 0.57	mg / m ³ ppm	2	SKC Cat. No. 226-09

Items	Parameter	Method	Reference Method / Analytical Technique	Air Volume	Sampling Rate / Period	LOQ / Range	Unit	Decimal point	Remark
36	Formaldehyde	Sorbent Adsorption, Gas Chromatography Method	NIOSH2541 (P.1-5) / PS pump / GC-FID	21 L	0.70 L/min (1 hr)	0.31 0.25	mg / m ³ ppm	2	SKC Cat. No. 226-118
37	Hydrogen chloride	Sorbent Adsorption, IC Method	U.S. EPA Method 26A /IC	0.12 m3	1 L/min (30 min)	0.015 0.010	mg / m ³ ppm	3	0.1 N H2SO4 / 0.1 N
38	Hydrogen fluoride	Sorbent Adsorption, IC Method	U.S. EPA Method 26A /IC	0.12 m3	1 L/min (30 min)	0.012 0.015	mg / m ³ ppm	3	0.1 N H2SO4 / 0.1 N
39	Nitric	Sorbent Adsorption, IC Method	U.S. EPA Method 26A /IC	0.029 m3	1 L/min (30 min)	0.026 0.010	mg / m ³ ppm	3	Milli-Q Water
40	Chlorine	Sorbent Adsorption, IC Method	U.S. EPA Method 26A /IC	0.12 m3	1 L/min (30 min)	0.029 0.010	mg / m ³ ppm	3	0.1 N H2SO4 / 0.1 N
41	Molybdenum (Mo)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
42	Titanium (Ti)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
43	Boron (B)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
44	Silicon (Si)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.005	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
45	Potassium (K)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.100	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
46	Phosphorus (P)	Isokinetic, Sampling,Digestion,ICP-OES Method	U.S. EPA Method 29 / ICP-AES	0.9 m ³	Isokinetic (30 min)	0.100	mg / m ³	3	Advantage MFS Cat No. GC5090 MM
47	Phosphoric acid	Sorbent Adsorption, IC Method	U.S. EPA Method 26A /IC	0.12 m3	1 L/min (30 min)	0.040 0.010	mg / m ³ ppm	3	SKC Cat. No. 226-10-03

เอกสารอ้างอิง

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การตรวจวิเคราะห์คุณภาพน้ำ – กากตะกอน (Water – Solid wastes Quality Analysis)

ตารางที่ 1 สรุปข้อกำหนดการเก็บตัวอย่างและความสามารถในการทดสอบตัวอย่างของห้องปฏิบัติการ ตามที่ขึ้นทะเบียนกับกรมโรงงานอุตสาหกรรม

(ประเภทตัวอย่าง : น้ำเสีย(ขึ้นทะเบียนกับกรมโรงงานฯ), น้ำ,น้ำเพื่ออุปโภค, น้ำประปา, น้ำผิวดิน, น้ำบาดาล และน้ำทะเล))

ส่วนงาน : ส่วนงานทดสอบพื้นฐาน

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
1.1	Biochemical Oxygen Demand (BOD ₅)	5-Day BOD Test, Membrane Electrode Method	Standard Method part 5210 B, 4500-O G / DO meter	Plastic	1000	-	2.0	mg/l	1	
1.2	Biochemical Oxygen Demand (BOD ₅)	5-Day BOD Test, Azide Modification Method	Standard Method part 5210 B, 4500-O C / Titration	Plastic	1000	-	2.0	mg/l	1	
2.1	Chemical Oxygen Demand (COD)	In-house Method	Standard Method part 5220 C / Titration	Plastic	100	-	40.0	mg/l as O ₂	0	
2.2	Chemical Oxygen Demand (COD)	Titrimetric, Closed Reflux Method	Standard Method part 5220 C / Titration	Plastic	100	-	40	mg/l as O ₂	0	
3	Free Chlorine	Iodometric Method	Standard Method part 4500-B / Titration	Plastic	100	-	0.50	mg/l	2	
4	Total Dissolved Solids (TDS)	Dried at 180 °C	Standard Method part 2540 C / Gravimetric	Plastic	200	-	25	mg/l	0	
5.1	Grease&Oil	In-house Method	Standard Method part 5520 B / Gravimetric	Glass	1000	-	3.0	mg/l	1	
5.2	Grease&Oil	Partition Gavimetric Method	Standard Method part 5520 B / Gravimetric	Glass	1001	-	3.0	mg/l	1	
6	Sulfide (S ₂ ⁻)	ZnS Precipitation ,Iodometric Method	Standard Method part 4500-S ²⁻ F / Titration	BOD bottle	300	-	0.50	mg/l as H ₂ S	2	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
7	pH	Electrometric Method	Standard Method part 4500 H ⁺ / pH meter	Plastic	50	-	3,0-12,0	-	1	
8	Total Suspended Solids (TSS)	Dried at 103-105 °C	Standard Method part 2540 D / Grvimetric	Plastic	1000	-	5	mg/l	0	
9	Temperature	Laboratory and Field Method	Standard Method part 2550 B / Thermometer	at field		-	1	°C	0	
10	Total Kjeldahl Nitrogen (TKN)	Macro-Kjeldahl Method	Standard Method part 4500-N _{org} / Titration	Plastic	500	-	5	mg/l as NH ₃ -N	0	
11	Hydrogen Sulfide (H ₂ S)	ZnS Precipitation ,Iodometric Method	Standard Method part 4500-S ²⁻ F / Titration	BOD bottle	300	-	0.53	mg/l as H ₂ S	2	

การตรวจวิเคราะห์คุณภาพน้ำ – ภาคตะกอน (Water – Solid wastes Quality Analysis)

ตารางที่ 2 สรุปข้อกำหนดการเก็บตัวอย่างและความสามารถในการทดสอบตัวอย่างของห้องปฏิบัติการ ตามที่ขึ้นทะเบียนกับกรมโรงงานอุตสาหกรรม

(ประเภทตัวอย่าง : น้ำใต้ดิน)

ส่วนงาน : ส่วนงานทดสอบพื้นฐาน

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
1	pH	Electrometric Method	Standard Method part 4500 H ⁺ / pH meter	Plastic	50	-	3.0-12.0	-	1	

การตรวจวิเคราะห์คุณภาพน้ำ – ภาคตะกอน (Water – Solid wastes Quality Analysis)

ตารางที่ 3 สรุปข้อกำหนดการเก็บตัวอย่างและความสามารถในการทดสอบตัวอย่างของห้องปฏิบัติการ ที่ไม่ได้ขึ้นทะเบียนกับกรมโรงงานอุตสาหกรรม

(ประเภทตัวอย่าง : น้ำ, น้ำเสีย, น้ำเพื่ออุปโภค, น้ำประปา, น้ำผิวดิน, น้ำบาดาล และน้ำทะเล)

ส่วนงาน : ส่วนงานทดสอบพื้นฐาน

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
1	Acidity	Titration Method	Standard Method part 2310 B / Titration	Plastic	50	-	20.0	mg/l as CaCO ₃	1	
2	M-Alkalinty	Titration Method	Standard Method part 2320 B / Titration	Plastic	50	-	20.0	mg/l as CaCO ₃	1	
3	P-Alkalinty	Titration Method	Standard Method part 2320 B / Titration	Plastic	50	-	20.0	mg/l as CaCO ₃	1	
4	Ammonia Nitrogen (NH ₃ -N)	Distillation and Titrimetric Method	Standard Method part 4500-NH ₃ ⁺ / Titration	Plastic	500		2	mg/l as NH ₃ -N	0	
5	Calcium Hardness	EDTA Titrimetric Method	Standard method part 3500-Ca B/ Titration	Plastic	100	-	3.0	mg/l as CaCO ₃	1	
6	Chloride (Cl ⁻)	Argentometric Method	Standard Method part 4500-Cl ⁻ B / Titration	Plastic	50	-	5.0	mg/l as Cl ⁻	1	
7	Chlorine (Residual)	DPD Colorimetric Method	Standard Method part 4500-Cl G / Test kit	Plastic	500	-	0.1	mg/l as Cl ₂	1	
8	Chlorine (Total)	DPD Colorimetric Method	Modified Standard Method part 4500-Cl G / Test kit	Plastic	500	-	0.1	mg/l as Cl ₂	1	
9	Fixed Solids (FS)	Dried at 550 °C	Standard Method part 2540 E / Gravimetric	Plastic	200	-	30.0	mg/l	1	
10	Hardness	EDTA Titrimetric Method	Standard Method part 2340 C / Titration	Plastic	100	-	6.0	mg/l as CaCO ₃	1	
11	Magnesium (Mg)	Calculation Method	Standard Method part 3500-Mg / Calculation	Plastic	100	-	0.70	mg/l as Mg	1	
12	Magnesium Hardness	Calculation Method	Standard Method part 3500-Mg / Calculation	Plastic	100	-	3.0	mg/l as CaCO ₃	1	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
	ส่วนงานจุลชีววิทยา									
1	Benthos	Counting Chamber Method	Standard Method part 10500 B / Counting	ถุงดำ	-	-	-	ind/m ²	0	รายงานค่าสุด =Not found
2	Escherichia Coli Bacteria (E.coli)	MPN Test	Standard Method part 9221 F / Fluorogenic Substrate , MPN	Glass	250	-	-	MPN:100 ml	ตามตาราง MPN-	รายงานค่าสุด 1.1 (น้ำดื่ม) / 1.8 (น้ำ)
3	Total Coliform	MPN Test	Standard Method part 9221 B / Fermentation Technique , MPN	Glass	250	-	-	MPN:100 ml	ตามตาราง MPN-	รายงานค่าสุด 1.1 (น้ำดื่ม) / 1.8 (น้ำ)
4	Thermotolerant coliforms (Fecal Coliform)	MPN Test	Standard Method part 9221 E /Thermolerant Coliform , MPN	Glass	250	-	-	MPN:100 ml	ตามตาราง MPN-	รายงานค่าสุด 1.1 (น้ำดื่ม) / 1.8 (น้ำ)
5	Heterotrophic Bacteria (Total Bacteria)	Heterotrophic plate count (Standard Plate Count Method)	Standard Method part 9215 B / Pour plate	Glass	250	1	1	Colonies/cm ³	0	*Heterotrophic plate count = Standard
6	Phytoplankton	Counting Chamber Method	Standard Method part 10200 F / Counting	Plstic	-	-	-	Cell / l	0	รายงานค่าสุด =Not found
7	Zooplankton	Counting Chamber Method	Standard Method part 10200 G / Counting	Plastic	-	-	-	ind./l	0	รายงานค่าสุด =Not found
8	S.Aureus	Enrichment	Standard Method part 9213 B	Glass	1000	-	-	-	รายงานพบ/ไม่พบ	รายงานค่าสุด =Not found
9	Salmonella sp.	Membrane Filter	Standard Method part 9260 B	Glass	1000	-	-	-	รายงานพบ/ไม่พบ	รายงานค่าสุด =Not found
10	Clostridium perfringens	Comperndium 2003,Chapter 34	Comperndium 2003,Chapter 34	Glass	1000	-	-	-	รายงานพบ/ไม่พบ	รายงานค่าสุด =Not found

การตรวจวิเคราะห์คุณภาพน้ำ – ภาคตะกอน (Water – Solid wastes Quality Analysis)

ตารางที่ 4 สรุปข้อกำหนดการเก็บตัวอย่างและความสามารถในการทดสอบตัวอย่างของห้องปฏิบัติการ ตามที่ขึ้นทะเบียนกับกรมโรงงานอุตสาหกรรม

(ประเภทตัวอย่าง : น้ำเสีย(ขึ้นทะเบียนกรมโรงงานฯ), น้ำ,น้ำเพื่ออุปโภค, น้ำประปา, น้ำผิวดิน, น้ำบาดาล และน้ำทะเล)

ส่วนงาน : ส่วนงานเครื่องมือทดสอบ

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
1	Arsenic (As)	Continuous Hydride Generation /Atomic Absorption Spectrometric Method	Standard Method Part 3114 B and 3114C / AAS	Plastic	500	0.0005	0.0	mg/l as As	4	น้ำทะเล MDL/LOQ = 1.00/2.00 ug/l
2	Barium (Ba)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F and 3120 B / ICP-OES	Plastic	500	0.02	0.0	mg/l as Ba	2	น้ำทะเล MDL/LOQ = 20/30 ug/l
3	Cadmium (Cd)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F and 3120 B / ICP-OES	Plastic	500	0.02	0.0	mg/l as Cd	2	น้ำทะเล MDL/LOQ = 20/30 ug/l
4	Chromium (Cr)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F and 3120 B / ICP-OES	Plastic	500	0.02	0.03	mg/l as Cr	0	น้ำทะเล MDL/LOQ = 20/30 ug/l
5	Color	ADMI Weighted-Ordinate Spectrophotometer Method	Standard Method part 2120 F / Spectrophotometer	Plastic	500	10	20	ADMI	0	
6	Chromium Hexavalence (Cr ⁶⁺)	Filtration,Colorimetric Method	Standard Method part 3500-Cr B / Spectrophotometer	Plastic	500	0.003	0.050	mg/l as Cr ⁶⁺	3	น้ำทะเล MDL/LOQ = 3.00/50.0 ug/l
7	Copper (Cu)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F and 3120 B / ICP-OES	Plastic	500	0.02	0.03	mg/l as Cu	2	น้ำทะเล MDL/LOQ = 20/30 ug/l
8	Cyanide (CN ⁻)	Distillation, Colorimetric Method	Standard Method part 4500 CN- C,E/ Spectrophotometer	Plastic	500	0.008	0.020	mg/l	3	น้ำทะเล MDL/LOQ = 8/20 ug/l
9	Formaldehyde	Distillation, Colorimetric Method	คู่มือวิเคราะห์น้ำเสีย,สมาคมวิศวกรรมสิ่งแวดล้อมแห่งประเทศไทย	Plastic	100	0.20	0.50	mg/l	2	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
20	สารฆ่าศัตรูพืชและสัตว์	Liquid-Liquid Extraction Gas Chromatography	Standard Method part 6630B/GC and APHA Method part 6410B/GC-MS	Glass	2500	0.03	0.05	ug/l	2	
	- alpha - BHC					0.02	0.05	ug/l	2	
	- beta - BHC					0.03	0.05	ug/l	2	
	- gamma - BHC					0.03	0.05	ug/l	2	
	- delta - BHC					0.03	0.05	ug/l	2	
	- Heptachlor					0.03	0.05	ug/l	2	
	- Aldrin					0.03	0.05	ug/l	2	
	- Heptachlor epoxide					0.03	0.05	ug/l	2	
	- Endosulfan I					0.03	0.05	ug/l	2	
	- p,p - DDE					0.03	0.05	ug/l	2	
	- Dieldrin					0.03	0.05	ug/l	2	
	- Endrin ketone					0.03	0.05	ug/l	2	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
	- Endosulfan II					0.03	0.05	ug/l	2	
	- p,p - DDD					0.03	0.05	ug/l	2	
	- Endrin Aldehyde					0.03	0.05	ug/l	2	
	- Endosulfan Sulfate					0.03	0.05	ug/l	2	
	- trans Chlordane					0.03	0.05	ug/l	2	
	- cis Chlordane					0.03	0.05	ug/l	2	
	- DDT		Standard Method part 6410B/GC-MS			0.03	0.05	ug/l	2	
	- Endrin					0.05	0.10	ug/l	2	
	- Methoxychlor					0.03	0.05	ug/l	2	

การตรวจวิเคราะห์คุณภาพน้ำ – ภาคตะกอน (Water – Solid wastes Quality Analysis)

ตารางที่ 6 สรุปข้อกำหนดการเก็บตัวอย่างและความสามารถในการทดสอบตัวอย่างของห้องปฏิบัติการ ที่ไม่ได้ขึ้นทะเบียนกับกรมโรงงานอุตสาหกรรม

(ประเภทตัวอย่าง : น้ำ, น้ำเสีย, น้ำใต้ดิน, น้ำเพื่ออุปโภค, น้ำประปา, น้ำผิวดิน, น้ำบาดาล และน้ำทะเล)

ส่วนงาน : ส่วนงานเครื่องมือทดสอบ

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
1	Antimony (Sb)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.05	0.1	mg/l as Sb	2	
2	Aluminium (Al)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.05	0.1	mg/l as Al	2	
3	Boron (B)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.01	0.0	mg/l as B	2	
4	Calcium (Ca)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.50	1.00	mg/l as Ca	0	
5	Cadmium (Cd)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.002	0.003	mg/l as Cd	3	น้ำดื่ม
6	Cobalt (Co)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.01	0.02	mg/l as Co	2	
7	Color	Spectrophotometric Method	Standard Method part 2120 C / Spectrophotometer	Plastic	500	0.50	1.00	Pt-Co	2	
8	Iron (Fe)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.02	0.03	mg/l as Fe	2	
9	Lead (Pb)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.005	0.010	mg/l as Pb	3	น้ำดื่ม
10	Magnesium (Mg)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.50	1.00	mg/l as Mg	2	
11	Molybdenum (Mo)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.01	0.02	mg/l as Mo	2	
12	Nitrite (NO ₂ ⁻)	Colorimetric Method	Standard Method part 4500-NO ₂ ⁻ B /	Plastic	500	0.003	0.030	mg/l as NO ₂ ⁻	3	
13	Nitrite-Nitrogen	Colorimetric Method	Standard Method part 4500-NO ₂ ⁻ B /	Plastic	500	0.001	0.010	mg/l as NO ₂ ⁻ -N	3	
14	Nitrate (NO ₃ ⁻)	Colorimetric Method	Standard Method part 4500-NO ₃ ⁻ B /	Plastic	500	0.09	0.44	mg/l as NO ₃ ⁻	2	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
15	Nitrate-Nitrogen (NO ₃ ⁻ -N)	Colorimetric Method	Standard Method part 4500-NO ₃ ⁻ B / Spectrophotometer	Plastic	500	0.02	0.10	mg/l as NO ₃ ⁻ -N	2	
16	Potassium (K)	Direct Aspiration-AAS Method	Standard Method part 3111 B / AAS	Plastic	500	0.008	0.025	mg/l as K	3	
17	Potassium (K)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.50	1.00	mg/l as K	2	
18	Selenium (Se)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.05	0.10	mg/l as Se	2	
19	Silica (SiO ₂)	Molybdosilicate Method	Standard Method part 4500-SiO ₂ C / Spectrophotometer	Plastic	500	1.00	2.00	mg/l as SiO ₂	2	
20	Silicon (Si)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.02	0.05	mg/l as Si	2	
21	Silver (Ag)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.02	0.05	mg/l as Ag	2	
23	Sodium (Na)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.50	1.00	mg/l as Na	2	
24	Sodium Absorption Ratio	Calculation,Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.50	1.00	-	2	
25	Strontium (Sr)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.01	0.02	mg/l as Sr	2	
26	Tin (Sn)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.05	0.10	mg/l as Sn	2	
27	Titanium (Ti)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.01	0.02	mg/l as Ti	2	
28	Thallium (Tl)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.05	0.10	mg/l as Tl	2	
29	Vanadium (V)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.01	0.02	mg/l as V	2	
30	Phosphate (PO ₄ ³⁻)	Ascorbic Acid Method	Standard Method part 4500-PO ₄ ³⁻ B/ Spectrophotometer	Plastic	500	0.03	0.46	mg/l as P	2	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
31	Phosphorus (P)	Ascorbic Acid Method	Standard Method part 4500-P B/ Spectrophotometer	Plastic	500	0.05	0.15	mg/l as PO_4^{3-}	2	
32	Sulfate (SO_4^{2-})	Turbidimetric Method	Standard Method part 4500- SO_4^{2-} E/ Spectrophotometer	Plastic	500	1.50	5.00	mg/l as SO_4^{2-}	2	
33	Surfactant (LAS)	Anionic Surfactants as MBAS	Standard Method Part 5540 C / Spectrophotometer	Plastic	500	0.35	0.40	mg/l as MBAS	2	
34	Surfactant (LAS)	Anionic Surfactants as MBAS	Standard Method Part 5540 C / Spectrophotometer	Plastic	1000	0.08	0.10	mg/l as MBAS	2	น้ำดื่ม
35	Fluoride (F^-)	Ion-Selective Electrode Method	Standard Method part 4500-F- C/ Spectrophotometer	Plastic	100	0.20	0.50	mg/l as F^-	2	
36	Gold (Au)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.02	0.05	mg/l as Au	2	
37	Phosphorus (P)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.50	1.00	mg/l as P	2	
38	Chlorine (Residual)	Spectrophotometric Method	Standard Method part 4500-Cl G / Spectrophotometer	Plastic	500	0.03	0.05	mg/l as Cl_2	2	
39	Beryllium	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F,3120 B / ICP-OES	Plastic	500	0.01	0.02	mg/l as B	2	

การตรวจวิเคราะห์คุณภาพน้ำ – ภาคตะกอน (Water – Solid wastes Quality Analysis)

ตารางที่ 5 สรุปข้อกำหนดการเก็บตัวอย่างและความสามารถในการทดสอบตัวอย่างของห้องปฏิบัติการ ตามที่ขึ้นทะเบียนกับกรมโรงงานอุตสาหกรรม

(ประเภทตัวอย่าง : น้ำใต้ดิน)

ส่วนงาน : ส่วนงานเครื่องมือทดสอบ

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
1	Antimony (Sb)	Digestion, Inductively Coupled Plasma Method	Standard Method part3030F and 3120 B / ICP-OES	Plastic	500	0.05	0.1	mg/l as Sb	2	
2	Arsenic (As)	Continuous Hydride Generation-ICP-OES Method	Standard Method part3030F and 3120 B / ICP-OES	Plastic	500	0.0010	0.0	mg/l as As	4	
3	Arsenic (As)	Continuous Hydride Generation /Atomic Absorption Spectrometric Method	Standard Method Part 3114 B and 3114 C / AAS	Plastic	500	0.0005	0.0	mg/l as As	4	
4	Barium (Ba)	Digestion, Inductively Coupled Plasma Method	Standard Method part3030F and 3120 B / ICP-OES	Plastic	500	0.02	0.03	mg/l as Ba	0	
5	Beryllium (Be)	Digestion, Inductively Coupled Plasma Method	Standard Method part3030F and 3120 B / ICP-OES	Plastic	500	0.005	0.01	mg/l as Be	2	
6	Cadmium (Cd)	Digestion, Inductively Coupled Plasma Method	Standard Method part3030F and 3120 B / ICP-OES	Plastic	500	0.002	0.003	mg/l as Cd	3	
7	Chromium (Cr)	Digestion, Inductively Coupled Plasma Method	Standard Method part3030F and 3120 B / ICP-OES	Plastic	500	0.02	0.03	mg/l as Cr	2	
8	Cyanide (CN ⁻)	Distillation, Colorimetric Method	Standard Method part 4500 CN ⁻ C,E/ Spectrophotometer	Plastic	500	0.008	0.020	mg/l	3	
9	Chromium Hexavalence (Cr ⁶⁺)	Filtration,Colorimetric Method	Standard Method part 3500-Cr B/ Spectrophotometer	Plastic	500	0.003	0.050	mg/l as Cr ⁶⁺	3	
10	Lead (Pb)	Digestion, Inductively Coupled Plasma Method	Standard Method part3030F and 3120 B / ICP-OES	Plastic	500	0.005	0.010	mg/l as Pb	3	
11	Manganese (Mn)	Digestion, Inductively Coupled Plasma Method	Standard Method part3030F and 3120 B / ICP-OES	Plastic	500	0.02	0.03	mg/l as Mn	2	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
12	Mercury (Hg)	Digestion, Cold Vapor Atomic Absorption Spectrometric Method	Standard Method part 3112 B / AAS	Plastic	500	0.0005	0.0010	mg/l as Hg	4	
13	Nickel (Ni)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F and 3120 B / ICP-OES	Plastic	500	0.02	0.03	mg/l as Ni	2	
14	Phenols	Distillation, Direct Photometric Method	Standard Method part 5530 D / Spectrophotometer	Plastic	500	0.002	0.005	mg/l	3	
15	Silver (Ag)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F and 3120 B / ICP-OES	Plastic	500	0.02	0.05	mg/l as Ag	2	
16	Trivalent Chromium (Cr ³⁺)	Digestion, Direct Aspiration-AAS Method; Filtration, Colorimetric Method; Calculation	Standard Method part 3500-Cr B & part 3111B / AAS	Plastic	500	0.05	0.10	mg/l	2	
17	Trivalent Chromium (Cr ³⁺)	Digestion, ICP-OES Method; Filtration, Colorimetric Method; Calculation	Standard Method part 3500-Cr B & part 3120B / ICP-OES	Plastic	500	0.02	0.03	mg/l	2	
18	Vanadium (V)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F and 3120 B / ICP-OES	Plastic	500	0.01	0.02	mg/l as V	2	
19	Zinc (Zn)	Digestion, Inductively Coupled Plasma Method	Standard Method part 3030F and 3120 B / ICP-OES	Plastic	500	0.02	0.03	mg/l as Zn	2	
20	Selenium (Se)	Digestion, Hydride Generation / Atomic Absorption Spectrometric Method	Standard Method part 3030F, 3114 B and 3114C	Plastic	500	0.0005	0.0020	mg/l	4	เริ่มทดสอบ 1 ม.ก. 2565
21	Volatile organic compounds; VOC#1	Purge-and-Trap / GC-MS	Standard Method part 6200B	Glass	40 *4					
2	- Bromodichloromethane					0.00050	0.00050	mg/l	5	
3	- Bromoform					0.00050	0.00050	mg/l	5	
4	- Carbon tetrachloride					0.00025	0.00025	mg/l	5	
5	- Chlorobenzene					0.00025	0.00050	mg/l	5	
6	- Chlorodibromomethane					0.00050	0.00100	mg/l	5	
7	- 1,2-Dichlorobenzene					0.00025	0.00050	mg/l	5	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
8	- 1,3-Dichlorobenzene					0.00025	0.00025	mg/l	5	
9	- 1,4-Dichlorobenzene					0.00025	0.00025	mg/l	5	
10	- 1,1-Dichloroethane					0.00025	0.00025	mg/l	5	
11	- 1,2-Dichloroethane					0.00025	0.00050	mg/l	5	
12	- 1,1-Dichloroethylene					0.00025	0.00050	mg/l	5	
13	- cis-1,2-Dichloroethylene					0.00050	0.00050	mg/l	5	
14	- trans-1,2-Dichloroethylene					0.00025	0.00050	mg/l	5	
15	- 1,2-Dichloropropane					0.00025	0.00050	mg/l	5	
16	- 1,3-Dichloropropane					0.00025	0.00050	mg/l	5	
17	- Ethylbenzene					0.00025	0.00050	mg/l	5	
18	- Methyl tert-butyl ether					0.00025	0.00050	mg/l	5	
19	- Naphthalene					0.00025	0.00100	mg/l	5	
20	- Nitrobenzene					0.00025	0.00025	mg/l	5	
21	- Styrene					0.00050	0.00100	mg/l	5	
22	- 1,1,2,2-Tetrachloroethane					0.00050	0.00050	mg/l	5	
23	- Tetrachloroethylene					0.00025	0.00050	mg/l	5	
24	- Toluene					0.00025	0.00050	mg/l	5	
25	- 1,2,4-Trichlorobenzene					0.00025	0.00050	mg/l	5	
26	- 1,1,1-Trichloroethane					0.00025	0.00025	mg/l	5	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
27	- 1,1,2-Trichloroethane					0.00025	0.00050	mg/l	5	
28	- Trichloroethylene					0.00025	0.00050	mg/l	5	
29	- 1,3,5-Trimethylbenzene					0.00025	0.00100	mg/l	5	
30	- Vinyl acetate					0.00050	0.00100	mg/l	5	
31	- Vinyl Chloride					0.00025	0.00025	mg/l	5	
32	- m-Xylene					0.00025	0.00100	mg/l	5	
33	- o-Xylene					0.00025	0.00100	mg/l	5	
34	- p-Xylene					0.00025	0.00100	mg/l	5	
35	- Xylene Total					0.00025	0.00100	mg/l	5	
22	Volatile organic compounds;VOC#2	Purge-and-Trap / GC-MS Method	Standard Method part 6200B	Glass	40 *4					
1	- Acetone					0.00100	0.00100	mg/l	5	
2	- Butanol					0.00100	0.00100	mg/l	5	
3	- Carbon disulfide					0.00200	0.00500	mg/l	5	
4	- Chloroform					0.00100	0.00200	mg/l	5	
5	- n-Hexane					0.00100	0.00200	mg/l	5	
6	- Dichloromethane					0.00200	0.00200	mg/l	5	
23	Semivolatile organic compounds #1	Liquid-Liquid Extraction / GC-MS (SM: 6410B)	Standard Method part 6410B	Glass	2500					
1	Acenaphthene					0.0005	0.0010	mg/l	4	
2	Anthracene					0.0005	0.0010	mg/l	4	
3	Benz[a]anthracene					0.0005	0.0010	mg/l	4	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
4	Benzo[b]fluoranthene					0.0005	0.0010	mg/l	4	
5	Benzo[k]fluoranthene					0.0005	0.0010	mg/l	4	
6	Benzo[a]pyrene					0.0005	0.0010	mg/l	4	
7	Benzo[ghi]perylene					0.0005	0.0010	mg/l	4	
8	Bis(2-chloroethyl) ether					0.0005	0.0100	mg/l	4	
9	Bis(2-ethylhexyl) phthalate					0.0005	0.0010	mg/l	4	
10	Butyl benzyl phthalate					0.0005	0.0010	mg/l	4	
11	Carbazole					0.0005	0.0010	mg/l	4	
12	p-Chloroaniline					0.0005	0.0100	mg/l	4	
13	2-Chlorophenol					0.0005	0.0010	mg/l	4	
14	Chrysene					0.0005	0.0010	mg/l	4	
15	Dibenz[a,h]anthracene					0.0005	0.0010	mg/l	4	
16	Di-n-butyl phthalate					0.0005	0.0100	mg/l	4	
17	2,4-Dichlorophenol					0.0005	0.0010	mg/l	4	
18	Diethyl Phthalate					0.0005	0.0010	mg/l	4	
19	2,4-Dimethylphenol					0.0005	0.0010	mg/l	4	
20	2,4-Dinitrotoluene					0.0005	0.0010	mg/l	4	
21	2,6-Dinitrotoluene					0.0005	0.0010	mg/l	4	
22	Di-n-octyl phthalate					0.0005	0.0010	mg/l	4	
23	Fluoranthene					0.0005	0.0010	mg/l	4	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
24	Fluorene					0.0005	0.0010	mg/l	4	
25	Hexachlorobenzene					0.0005	0.0010	mg/l	4	
26	Hexachloro-1,3-butadiene					0.0005	0.0010	mg/l	4	
27	Hexachlorocyclopentadiene					0.0005	0.0100	mg/l	4	
28	Hexachloroethane					0.0005	0.0010	mg/l	4	
29	Indeno[1,2,3-cd]pyrene					0.0005	0.0010	mg/l	4	
30	Isophorone					0.0005	0.0010	mg/l	4	
31	2-Methylphenol (o-Cresol)					0.0005	0.0010	mg/l	4	
32	2-Methylnaphthalene					0.0005	0.0010	mg/l	4	
33	N-Nitrosodi-n-propylamine					0.0005	0.0010	mg/l	4	
34	Phenanthrene					0.0005	0.0010	mg/l	4	
35	Phenol					0.0005	0.0010	mg/l	4	
36	Pyrene					0.0005	0.0010	mg/l	4	
37	2,4,5-Trichlorophenol					0.0005	0.0010	mg/l	4	
38	2,4,6-Trichlorophenol					0.0005	0.0010	mg/l	4	
24	Semivolatile organic compounds #2	Liquid-Liquid Extraction / GC-MS (SM: 6410B)	Standard Method part 6410B	Glass	2500	0.030	0.050	µg/l	3	
1	Aldrin					0.030	0.050	µg/l	3	
2	Chlordane					0.030	0.050	µg/l	3	
3	DDD					0.030	0.050	µg/l	3	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
4	DDE					0.030	0.050	µg/l	3	
5	DDT					0.030	0.050	µg/l	3	
6	Dieldrin					0.030	0.050	µg/l	3	
7	Endosulfan					0.030	0.050	µg/l	3	
8	Endrin					0.050	0.100	µg/l	3	
9	Heptachlor					0.030	0.050	µg/l	3	
10	Heptachlor epoxide					0.030	0.050	µg/l	3	
11	alpha - BHC					0.020	0.050	µg/l	3	
12	beta - BHC					0.030	0.050	µg/l	3	
13	gamma - BHC					0.030	0.050	µg/l	3	
14	Methoxychlor					0.030	0.050	µg/l	3	

การตรวจวิเคราะห์คุณภาพน้ำ – ภาคตะกอน (Water – Solid wastes Quality Analysis)
ตารางที่ 7 สรุปข้อกำหนดการเก็บตัวอย่างและความสามารถในการทดสอบตัวอย่างของห้องปฏิบัติการ ตามที่ขึ้นทะเบียนกับกรมโรงงานอุตสาหกรรม

(ประเภทตัวอย่าง : ภาคตะกอน ตามประกาศเรื่องสิ่งปฏิกูลที่ไม่ใช่แล้ว และ ดิน)

ส่วนงาน : ส่วนงานเครื่องมือทดสอบ

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (g)	MDL	LOQ	Unit	Decimal point	Remark
1	Antimony (Sb)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.05	0.1	mg/l as Sb	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			2.50	5.0	mg/kg as Sb		
2	Arsenic (As)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.05	0.1	mg/l as As	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			2.50	5.00	mg/kg as As		
3	Barium (Ba)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.01	0.02	mg/l as Ba	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			0.50	1.00	mg/kg as Ba		
4	Beryllium (Be)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.01	0.02	mg/l as Be	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			0.50	1.00	mg/kg as Be		
5	Cadmium (Cd)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.01	0.02	mg/l as Cd	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			0.10	0.15	mg/kg as Cd		
6	Chromium (Cr)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.01	0.02	mg/l as Cr	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			0.50	1.00	mg/kg as Cr		
7	Cobalt (Co)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.01	0.02	mg/l as Co	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			0.50	1.00	mg/kg as Co		
8	Copper (Cu)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.01	0.02	mg/l as Cu	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			0.50	1.00	mg/kg as Cu		
9	Hexavalent Chromium (Cr ⁶⁺)	Colorimetric Method/ Spectrophotometer	SW 846 Method 7196A / Spectrophotometer	Plastic	500	0.003	0.050	mg/l as Cr	3	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (g)	MDL	LOQ	Unit	Decimal point	Remark
		Alkaline Digestion,Colorimetric Method/ Spectrophotometer	US EPA SW 846 Method 3060A and 7196A / Spectrophotometer			0.40	2.00	mg/kg as Cr	2	
10	Lead (Pb)	Waste Extraction , ICP-OES Method Digestion,ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.01 0.50	0.02 1.00	mg/l as Pb mg/kg as Pb	2	
11	Mercury (Hg)	Waste Extraction, Cold Vapor Technique-AAS Method	US EPA SW 846 Method 1310A and Standard Method part 3112 B/ AAS	Plastic	500	0.0005	0.0010	mg/l as Hg	4	
12	Molybdenum (Mo)	Waste Extraction , ICP-OES Method Digestion,ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.01 0.50	0.02 1.00	mg/l as Mo mg/kg as Mo	2	
13	Nickel (Ni)	Waste Extraction , ICP-OES Method Digestion,ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.01 0.50	0.02 1.00	mg/l as Ni mg/kg as Ni	2	
14	Selenium (Se)	Waste Extraction , ICP-OES Method Digestion,ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.05 2.50	0.10 5.00	mg/l as Se mg/kg as Se	2	
15	Silver (Ag)	Waste Extraction , ICP-OES Method Digestion,ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.02 1.00	0.05 2.50	mg/l as Ag mg/kg as Ag	2	
16	Thallium (Tl)	Waste Extraction , ICP-OES Method Digestion,ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.05 2.50	0.10 5.00	mg/l as V mg/kg as V	2	
17	Vanadium (V)	Waste Extraction , ICP-OES Method Digestion,ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.01 0.50	0.02 1.00	mg/l as V mg/kg as V	2	
18	Zinc (Zn)	Waste Extraction , ICP-OES Method Digestion,ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.01 0.50	0.02 1.00	mg/l as Zn mg/kg as Zn	2	

การตรวจวิเคราะห์คุณภาพน้ำ – ภาคตะกอน (Water – Solid wastes Quality Analysis)

ตารางที่ 8 สรุปข้อกำหนดการเก็บตัวอย่างและความสามารถในการทดสอบตัวอย่างของห้องปฏิบัติการ ตามที่ขึ้นทะเบียนกับกรมโรงงานอุตสาหกรรม

(ประเภทตัวอย่าง : ดิน)

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (g)	MDL	LOQ	Unit	Decimal point	Remark
1	Arsenic (As)	Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	2.50	5.00	mg/kg as As	2	
2	Antimony (Sb)	Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	2.50	5.0	mg/kg as Sb	2	
3	Barium (Ba)	Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.50	1.0	mg/kg as Ba	2	
4	Beryllium (Be)	Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.50	1.0	mg/kg as Be	2	
5	Cadmium (Cd)	Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.10	0.15	mg/kg as Cd	0	
6	Chromium (Cr)	Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.50	1.00	mg/kg as Cr	2	
7	Hexavalent Chromium (Cr ⁶⁺)	Digestion,Colorimetric Method	US EPA SW 846 Method 3060A and 7196A / Spectrophotometer	Plastic	500	0.40	2.00	mg/kg as Cr	3	
8	Lead (Pb)	Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.50	1.00	mg/kg as Pb	2	
9	Manganese (Mn)	Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.50	1.00	mg/kg as Mn	2	
10	Mercury (Hg)	Digestion,Cold Vapor Technique- AAS Method	US EPA SW 846 Method 3050B and 7471B / AAS	Plastic	500	0.10	0.20	mg/kg as Hg	4	
11	Nickel (Ni)	Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.50	1.00	mg/kg as Ni	2	
12	Selenium (Se)	Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	2.50	5.00	mg/kg as Se	2	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (g)	MDL	LOQ	Unit	Decimal point	Remark
13	Silver (Ag)	Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	1.00	2.50	mg/kg as Ag	2	
14	Trivalent Chromium (Cr ³⁺)	Digestion,ICP-OES Method; Filtration,Colorimetric Method;Calculation	US EPA SW 846 Method 3050B and 6010C / ICP-OESUS ; Method 3060A and 7196A / Spectrophotometer	Plastic	500	0.40	2.00	mg/k as Cr	3	
15	Vanadium (V)	Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.50	1.00	mg/kg as V	2	
16	Zinc (Zn)	Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES	Plastic	500	0.50	1.00	mg/kg as Zn	2	
17	Volatile organic compounds;VOC			Glass	50					
1	- Acetone	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
2	- Benzene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
3	- Bromodichloromethane	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
4	- Bromoform	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
5	- Butanol	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
7	- Carbon tetrachloride	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
8	- Chlorobenzene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
9	- Chlorodibromomethane	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
10	- Chloroform	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (g)	MDL	LOQ	Unit	Decimal point	Remark
11	- 1,2-Dichlorobenzene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
12	- 1,3-Dichlorobenzene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
13	- 1,4-Dichlorobenzene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
14	- 1,1-Dichloroethane	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
15	- 1,2-Dichloroethane	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
16	- 1,1-Dichloroethylene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
17	- cis-1,2-Dichloroethylene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
18	- trans-1,2-Dichloroethylene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
19	- 1,2-Dichloropropane	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
20	- 1,3-Dichloropropane	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
21	- Ethylbenzene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
22	- n-Hexane	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.010	0.010	mg/kg	3	
23	- Methylene Chloride or Dichloromethane	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
24	- Methyl tert-butyl ether	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (g)	MDL	LOQ	Unit	Decimal point	Remark
25	- Naphthalene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
26	- Nitrobenzene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
27	- Styrene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
28	- 1,1,2,2-Tetrachloroethane	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
29	- Tetrachloroethylene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
30	- Toluene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
31	- 1,2,4-Trichlorobenzene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
32	- 1,1,1-Trichloroethane	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
33	- 1,1,2-Trichloroethane	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
34	- Trichloroethylene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
35	- 1,3,5-Trimethylbenzene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
36	- Vinyl acetate	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
37	- Vinyl Chloride	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
38	- m-Xylene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
39	- o-Xylene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (g)	MDL	LOQ	Unit	Decimal point	Remark
40	- p-Xylene	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
41	- Xylene Total	Purge-and-Trap / GC-MS	US EPA SW 846 Method 5035A and 8260D	Glass	50	0.005	0.010	mg/kg	3	
18	Semivolatile organic compounds #1			Glass	2500					
1	Acenaphthene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
2	Anthracene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.500	mg/kg	3	
3	Benz[a]anthracene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
4	Benzo[b]fluoranthene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
5	Benzo[k]fluoranthene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
6	Benzo[a]pyrene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.500	mg/kg	3	
7	Benzo[ghi]perylene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
8	Bis(2-chloroethyl) ether	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
9	Bis(2-ethylhexyl) phthalate	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.500	mg/kg	3	
10	Butyl benzyl phthalate	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
11	Carbazole	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
12	p-Chloroaniline	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.500	1.250	mg/kg	3	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (g)	MDL	LOQ	Unit	Decimal point	Remark
13	2-Chlorophenol	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
14	Chrysene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
15	Dibenz[a,h]anthracene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
16	Di-n-butyl phthalate	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
17	2,4-Dichlorophenol	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.500	mg/kg	3	
18	Diethyl Phthalate	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
19	2,4-Dimethylphenol	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.500	mg/kg	3	
20	2,4-Dinitrotoluene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.500	mg/kg	3	
21	2,6-Dinitrotoluene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.500	mg/kg	3	
22	Di-n-octyl phthalate	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.500	mg/kg	3	
23	Fluoranthene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
24	Fluorene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
25	Hexachlorobenzene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
26	Hexachloro-1,3-butadiene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
27	Hexachlorocyclopentadiene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (g)	MDL	LOQ	Unit	Decimal point	Remark
28	Hexachloroethane	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
29	Indeno[1,2,3-cd]pyrene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.500	mg/kg	3	
30	Isophorone	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
31	2-Methylphenol (o-Cresol)	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.500	mg/kg	3	
32	2-Methylnaphthalene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
33	N-Nitrosodi-n-propylamine	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
34	Phenanthrene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
35	Phenol	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
36	Pyrene	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.250	mg/kg	3	
37	2,4,5-Trichlorophenol	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.500	mg/kg	3	
38	2,4,6-Trichlorophenol	Ultrasonic Extraction / GC-MS	US EPA SW 846 Method 3550C and 8270E	Glass	2500	0.125	0.500	mg/kg	3	

การตรวจวิเคราะห์คุณภาพน้ำ – กากตะกอน (Water – Solid wastes Quality Analysis)

ตารางที่ 9 สรุปข้อกำหนดการเก็บตัวอย่างและความสามารถในการทดสอบตัวอย่างของห้องปฏิบัติการ ที่ไม่ได้ขึ้นทะเบียนกับกรมโรงงานอุตสาหกรรม

(ประเภทตัวอย่าง : กากตะกอน ตามประกาศเรื่องสิ่งปฏิกูลที่ไม่ใช่แล้ว)

ส่วนงาน : ส่วนงานเครื่องมือทดสอบ

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
1	Aluminium (Al)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.05	0.1	mg/l as Al	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			2.50	5.0	mg/kg as Al	2	
2	Boron (B)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.01	0.0	mg/l as B	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			0.50	1.00	mg/kg as B	0	
3	Calcium (Ca)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.05	0.10	mg/l as Ca	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			25.0	50.0	mg/kg as Ca	1	
4	Iron (Fe)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.02	0.03	mg/l as Fe	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			1.00	1.50	mg/kg as Fe	2	
5	Magnesium (Mg)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.05	0.10	mg/l as Mg	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			25.0	50.0	mg/kg as Mg	1	
6	Manganese (Mn)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.01	0.02	mg/l as Mn	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			0.50	1.00	mg/kg as Mn	2	
7	Potassium (K)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.50	1.00	mg/l as K	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			25.00	50.0	mg/kg as K	2	
8	Silicon (Si)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.02	0.05	mg/l as Si	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			1.00	2.50	mg/kg as Si	2	
9	Sodium (Na)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.50	1.00	mg/l as Na	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			25.0	50.0	mg/kg as Na	1	
10	Strontium (Sr)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.01	0.02	mg/l as Sr	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			0.50	1.00	mg/kg as Sr	2	
11	Tin (Sn)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.05	0.10	mg/l as Sn	2	
12	Titanium (Ti)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.01	0.02	mg/l as Ti	2	

Items	Parameter	Method	Reference Method / Analytical Technique	Container	sample size (ml)	MDL	LOQ	Unit	Decimal point	Remark
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			0.50	1.00	mg/kg as Ti	2	
13	Phosphorus (P)	Waste Extraction , ICP-OES Method	US EPA SW 846 Method 1310A and 6010C / ICP-OES	Plastic	500	0.50	1.00	mg/l as Ti	2	
		Digestion,ICP-OES Method	US EPA SW 846 Method 3050B and 6010C / ICP-OES			25.00	50.0	mg/kg as Ti	2	

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- 1

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