

ภาคผนวก ก-7

ผลการตรวจวิเคราะห์น้ำเสียรายโรงงาน



Analysis / Test Report

Client: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location: ESIE

TESTING
No. 0042
Lot-ID: 2288181
Date Received : Aug 08, 2022
Date Reported : Aug 15, 2022
Report Number: 2288482-1

Page 1 of 1

Sample Number: 2288181-1
Sample Date: Aug 08, 2022 9:25 AM
Sample Description: Wastewater
Contract ID: L_ESIE_179_2550 Plot: PK-07 Site: J-CONS ASIA Co., Ltd.
Date Analysis Commenced: Aug 08, 2022
Condition of Sample: Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property: Yellow, a lot of colour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOE)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	35	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	146	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	28.5	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	23	≤200	APHA (2017), 2540 D	Rayong

Guideline: Notification of the Industrial Estate Authority of Thailand No.75, B.E. 2560: Criteria of wastewater characteristic from factory discharge to central Wastewater Treatment Plant

Sampled By: Peltrompong Kornswat

Remark:

- LOD: Limit of Detection
- "LOQ": Lower than LOQ (Limit of Quantification) / LOE (Limit of Reporting)
- Analytical method: Not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphit

Narumon Bandhugit

Supervisor

Approved by

Dej Changchon

Senior Manager

Yodchaisri 7-323-4-9442

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5-Marketplace Mail (2.0304)



Analysis / Test Report

Client: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
P/O :
Project Name : Random Check
Project Location: ESIE

TESTING
No. 0042
Lot-ID: 22104255
Date Received : Sep 02, 2022
Date Reported : Sep 09, 2022
Report Number: 2414908-1

Page 1 of 1

Sample Number: 22104255-1
Sample Date: Sep 02, 2022 10:29 AM
Sample Description: Wastewater
Contract ID: L_ESIE_179_2550 Plot: PK-07 Site: J-CONS ASIA Co., Ltd.
Date Analysis Commenced: Sep 02, 2022
Condition of Sample: Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property: Yellow, a lot of colour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOE)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	69	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	184	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	119	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	116	≤600	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	0.005	Not Detected	≤0.2	Based on APHA (2017), 4500-CN(C), (E)	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	3	8	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.0	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	0.03	≤1	APHA (2017), 5550 D	Rayong
Temperature *	Degree C	-	-	29.2	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	432	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 102-105 degree C	mg/L	-	5	40	≤200	APHA (2017), 2540 D	Rayong

Guideline: Notification of the Industrial Estate Authority of Thailand No.75, B.E. 2560: Criteria of wastewater characteristic from factory discharge to central Wastewater Treatment Plant

Sampled By: Peltrompong Kornswat

Remark:

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- Analytical method: Not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphit

Narumon Bandhugit

Supervisor

Approved by

Dej Changchon

Senior Manager

Yodchaisri 7-323-4-9442

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
P/O :
Project Name : Random Check
Project Location : ESIE

Page 1 of 1

Sample Number 22104255-1
Sampled Date Sep 02, 2022 10:29 AM
Sample Description Wastewater
Contract ID L_ESIE_179_2550 Plot PK-07 Site I-CONS ASIA Co., Ltd.
Date Analysis Commenced Sep 05, 2022
Condition of Sample Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of colour, acid and some turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.001	≤0.25	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.0003	0.0005	0.10	≤1.0	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.0003	0.0005	0.79	≤2.0	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Based on APHA (2017), 3500-Cr (6)	Bangkok
Lead	mg/L	0.0003	0.0005	0.02	≤0.2	Based on APHA (2017), 3125	Bangkok
Manganese	mg/L	0.0003	0.0005	0.07	≤5.0	Based on APHA (2017), 3125	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Based on APHA (2017), 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.02	≤1.0	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	≤0.02	Based on APHA (2017), 3125	Bangkok
Trivalent Chromium *	mg/L	0.01	0.01	<0.01	≤0.75	Based on APHA (2017), 3125	Bangkok
Zinc	mg/L	0.003	0.005	0.83	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Phitaya Thongdaeng, Nantawat Sain

Remark :
• LOD : Unit of Detection
• < : Lower than LOQ (Unit of Quantitation) / LOQ (Unit of Reporting)
• Analytes marked * : Item not included in scope of Accreditation ISO/IEC 17025.
• The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Savitree Mueangman
Manager

Approved by

Kanokorn Anuk
Manager

22104255-1

22104255-1

The above results are only valid for the sample(s) analyzed as indicated. They are not valid for any other sample(s) or for any other purpose.

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400-91-0000

51900001_01_01 (13/09/21)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
P/O :
Project Name : Random Check
Project Location : ESIE

Page 1 of 1

Sample Number 22104255-1
Sampled Date Sep 02, 2022 10:29 AM
Sample Description Wastewater
Contract ID L_ESIE_179_2550 Plot PK-07 Site I-CONS ASIA Co., Ltd.
Date Analysis Commenced Sep 05, 2022
Condition of Sample Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of colour, acid and some turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Iron	mg/L	0.003	0.005	0.97	≤10.0	Based on APHA (2017), 3125	Bangkok
Water Testing							
Fluoride	mg/L	0.05	0.2	<0.2	≤5	APHA (2017), 4500-F(C)	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Phitaya Thongdaeng, Nantawat Sain

Remark :
• LOD : Unit of Detection
• < : Lower than LOQ (Unit of Quantitation) / LOQ (Unit of Reporting)
• Analytes marked * : Item not included in scope of Accreditation ISO/IEC 17025.
• (A) Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, DSS Accreditation no. 0009.
• The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

The above results are only valid for the sample(s) analyzed as indicated. They are not valid for any other sample(s) or for any other purpose.

Approved by

Dej Changphon
Senior Manager

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400-91-0000

51900001_01_01 (13/09/21)



Analysis / Test Report

Client: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Lot ID: 22104592

Date Received : Oct 11, 2022

Date Reported : Oct 17, 2022

Report Number: 2447983-1

Page 1 of 1

Sample Number 22104592-1
Sample Date Oct 11, 2022 2:25 PM
Sample Description Wastewater
Contract ID L ESIE_179_2550 Plot Px-07 Site I-CONS-ASIA Co., Ltd.
Date Analysis Commenced Oct 11, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	17	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	52	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.6	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 105-105 degree C	mg/L	-	5	18	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Tanasat Wongsochai

Remark :
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* "C" : Lower than LOD (Limit of Quantitation) / LOR (Limit of Reporting)
* Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
* The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Thantita Kulniruwong

Approved by

Thantita Kulniruwong

Senior Manager

Dej Changchon

Senior Manager

Wattana Wattana 7-323-9-9442

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Signature of Client (Signature)



Analysis / Test Report

Client: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Lot ID: 21150443

Date Received : Jan 10, 2022

Date Reported : Jan 17, 2022

Report Number: 2187785-1

Page 1 of 1

Sample Number 21150443-1
Sample Date Jan 10, 2022 2:04 PM
Sample Description Wastewater
Contract ID L ESIE_014_2554 Plot P-3L Site Koide (Thailand) Co., Ltd.
Date Analysis Commenced Jan 10, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Black, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	54	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	120	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.2	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.3	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	25	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Pitthaya Thongdaeng

Remark :
* LOD : Limit of Detection
* "C" : Lower than LOD (Limit of Quantitation) / LOR (Limit of Reporting)
* Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

Technical Management

N. Banphit

Approved by

Dej Changchon

Senior Manager

Wattana Wattana 7-323-9-9442

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Signature of Client (Signature)



Analysis / Test Report

TESTING
No.0042
Lot ID: 2210680

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
Date Received : Feb 10, 2022
Date Reported : Feb 17, 2022
Report Number : 2215935-1

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number	2210680-1
Sampled Date	Feb 10, 2022 10:54 AM
Sample Description	Wastewater
Contract ID	L-ESIE-014-2554
Plot	P-31
Site	Koide (Thailand) Co., Ltd.
Date Analysis Commenced	Feb 10, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Black, a lot of odour, some solid and a lot of turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	65	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	122	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.2	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.5	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	22	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Wanlop Hunchanaow

Remark :
- LOD : Limit of Detection
- "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- "X" : Analyte(s) marked "X" is/are not included in scope of Accreditation ISO/IEC 17025.

Technical Management

N. Banphit
Narumon Banchoangkit
Supervisor
โทรศัพท์ ๐-๓๒๓-๙๙๔๕

Approved by

D. Phum
Dej Changchon
Senior Manager
โทรศัพท์ ๐-๓๒๓-๙๙๔๕

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Analysis / Test Report

TESTING
No.0042
Lot ID: 2222452

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
Date Received : Mar 04, 2022
Date Reported : Mar 10, 2022
Report Number : 2238144-1

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number	2222452-1
Sampled Date	Mar 04, 2022 1:37 PM
Sample Description	Wastewater
Contract ID	L-ESIE-014-2554
Plot	P-31
Site	Koide (Thailand) Co., Ltd.
Date Analysis Commenced	Mar 04, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	36	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	94	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.1	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.4	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	29	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Chanusorn Letnanthakulchai

Remark :
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- "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- "X" : Analyte(s) marked "X" is/are not included in scope of Accreditation ISO/IEC 17025.

Technical Management

N. Banphit
Narumon Banchoangkit
Supervisor
โทรศัพท์ ๐-๓๒๓-๙๙๔๕

Approved by

D. Phum
Dej Changchon
Senior Manager
โทรศัพท์ ๐-๓๒๓-๙๙๔๕

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51899991_A4_Gr.pdf (7/18/04)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O : Factory | Monthly
Project Name : ESIE
Project Location: ESIE

TESTING
No.0042
Lot ID: 2234993
Date Received : Apr 04, 2022
Date Reported : Apr 11, 2022
Report Number: 2266422-1

Page 1 of 1

Sample Number 2234993-1
Sampled Date Apr 04, 2022 3:38 PM
Sample Description Wastewater
Contract ID L/ESIE 014_2554 Plot P-31 Site Koide (Thailand) Co., Ltd.
Date Analysis Commenced Apr 04, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, some solid and a lot of turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	44	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	115	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.5	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	31.2	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	27	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Naruon Banchonglit

Remark :

- LOD : Limit of Detection
- "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

Technical Management

N. Banchonglit

Narumon Banchonglit
Supervisor

วสุฒิณูวณท์ 3-323-9-9445

Approved by

D. Chanchon

Dej Chanchon
Senior Manager

วสุฒิณูวณท์ 3-323-9-9442

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480541 (P&M)

S:\Report\AL_Go-apt (138PM)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O : Random Check
Project Name : ESIE
Project Location: ESIE

TESTING
No.0042
Lot ID: 2249449
Date Received : May 04, 2022
Date Reported : May 11, 2022
Report Number: 2297148-1

Page 1 of 1

Sample Number 2249449-1
Sampled Date May 04, 2022 1:40 PM
Sample Description Wastewater
Contract ID L/ESIE 014_2554 Plot P-31 Site Koide (Thailand) Co., Ltd.
Date Analysis Commenced May 04, 2022
Condition of Sample Contained in one amber glass bottle, seven plastic bottles and two glass vials. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, some solid and a lot of turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	72	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	170	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMT	-	5	97	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMT	-	5	96	≤600	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	0.005	<0.005	≤0.2	Based on APHA (2017), 4500-CN(C), (E)	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.5	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	0.03	≤1	APHA (2017), 5530 D	Rayong
Temperature *	Degree C	-	-	31.5	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	252	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	34	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Paramet Sattayakun , Thanasoun Namsakuma

Remark :

- LOD : Limit of Detection
- "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

Technical Management

N. Banchonglit

Narumon Banchonglit
Supervisor

วสุฒิณูวณท์ 3-323-9-9445

Approved by

D. Chanchon

Dej Chanchon
Senior Manager

วสุฒิณูวณท์ 3-323-9-9442

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Analysis / Test Report

TESTING
No. 0009

Lot ID: 2249449
Date Received : May 04, 2022
Date Reported : May 13, 2022
Report Number : 2297148-2

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location : ESIE

Page 1 of 1

Sample Number 2249449-1
Sampled Date May 04, 2022 1:40 PM
Sample Description Wastewater
Contract ID L-ESIE-014_2554 Plot P-31 Site Koide (Thailand) Co., Ltd.
Date Analysis Commenced May 05, 2022
Condition of Sample Contained in one amber glass bottle, seven plastic bottles and two glass vials. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, some solid and a lot of turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.001	≤0.25	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.0003	0.0005	0.12	≤1.0	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.0003	0.0005	0.02	≤2.0	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Based on APHA (2017), 3500-Cr (6)	Bangkok
Lead	mg/L	0.0003	0.0005	0.002	≤0.2	Based on APHA (2017), 3125	Bangkok
Manganese	mg/L	0.0003	0.0005	0.15	≤5.0	Based on APHA (2017), 3125	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Based on APHA (2017), 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.006	≤1.0	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	≤0.02	Based on APHA (2017), 3125	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	Based on APHA (2017), Calculated	Bangkok
Zinc	mg/L	0.003	0.005	0.21	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Paramet Sattayakun , Thanassou Namakunna

Remark :
- LOD : Limit of Detection
- "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

Technical Management

Savitree N.
Savitree Nolsanglam
Manager
วณิชฐาณีย์ 7-204-4-4709

Approved by

Kanokorn Anek
Senior Manager
วณิชฐาณีย์ 7-204-6-6111

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E-Report_ALS.th (7/23/90)



Analysis / Test Report

TESTING
No. 0042

Lot ID: 2249449
Date Received : May 04, 2022
Date Reported : May 11, 2022
Report Number : 2297148-3

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location : ESIE

Page 1 of 1

Sample Number 2249449-1
Sampled Date May 04, 2022 1:40 PM
Sample Description Wastewater
Contract ID L-ESIE-014_2554 Plot P-31 Site Koide (Thailand) Co., Ltd.
Date Analysis Commenced May 05, 2022
Condition of Sample Contained in one amber glass bottle, seven plastic bottles and two glass vials. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, some solid and a lot of turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Iron	mg/L	0.003	0.005	0.68	≤10.0	Based on APHA (2017), 3125	Bangkok
Water Testing							
Fluoride	mg/L	0.05	0.2	<0.2	≤5	APHA (2017), 4500-F(C)	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Paramet Sattayakun , Thanassou Namakunna

Remark :
- LOD : Limit of Detection
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- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, OSS Accreditation No. 0009.

Approved by

D. Chumma
Dej Changchon
Senior Manager

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E-Report_ALS.th (12/4/90)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Lot ID: 2259582
Date Received : Jun 07, 2022
Date Reported : Jun 13, 2022
Report Number : 2318907-1

Page 1 of 1

Sample Number	2259582-1
Sampled Date	Jun 07, 2022 2:45 PM
Sample Description	Wastewater
Contract ID	L-ESIE_014_2554
Plot	P-31
Site	Koide (Thailand) Co., Ltd.
Date Analysis Commenced	Jun 07, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation
Physical Property	Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	72	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	219	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	9	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	32.3	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	58	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Pattompong Komsawat

Remark :
• LOD : Limit of Detection
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• Analytical method : Is not included in scope of Accreditation ISO/IEC 17025.
• The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphat

Approved by

D. Chuan

Dej Changchon
Senior Manager

WatBanphat 7-323-a-9445

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4854U 04/24

S. Sappasit, JALIS (23/04/24)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
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Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Lot ID: 2275336
Date Received : Jul 14, 2022
Date Reported : Jul 19, 2022
Report Number : 2330041-1

Page 1 of 1

Sample Number	2275336-1
Sampled Date	Jul 14, 2022 9:20 AM
Sample Description	Wastewater
Contract ID	L-ESIE_010_2552
Plot	M-07
Site	Navate International (Thailand) Co., Ltd.
Date Analysis Commenced	Jul 14, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation
Physical Property	standards (APHA / USEPA) Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	11	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.9	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.3	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Paramet Sittayakun

Remark :
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• Analytical method : Is not included in scope of Accreditation ISO/IEC 17025.
• The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphat

Approved by

D. Chuan

Dej Changchon
Senior Manager

WatBanphat 7-323-a-9445

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4854U 04/24

S. Sappasit, JALIS (23/04/24)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

TESTING
No.0042
Lot ID: 2288245
Date Received : Aug 04, 2022
Date Reported : Aug 10, 2022
Report Number : 2282865-1

Page 1 of 1

Sample Number : 2288245-1
Sample Date : Aug 04, 2022 11:25 AM
Sample Description : Wastewater
Contract ID : LESIE_010_2552 Plot N-07 Site : Mapas International (Thailand) Co., Ltd.
Date Analysis Commenced : Aug 04, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, some odour, solid and turbid

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	2	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	≤750	APHA (2017), 520 D	Rayong
Oil & Grease	mg/L	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	7.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	32.0	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	11	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanat Wonggachai

Remark :

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Technical Management

N. Banphit
Narumon Banphongit
Supervisor
NIDUNARAT 7-323-n-9445

Approved by

D. Jumnas
Dej Changchon
Senior Manager
NIDUNARAT 7-323-n-9442

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HIGHT SOLUTIONS

488331 P/ML

8-Months A.G. as (Lab/Reg)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

TESTING
No.0042
Lot ID: 22104370
Date Received : Sep 05, 2022
Date Reported : Sep 12, 2022
Report Number : 2415960-1

Page 1 of 1

Sample Number : 22104370-1
Sample Date : Sep 05, 2022 2:10 PM
Sample Description : Wastewater
Contract ID : LESIE_010_2552 Plot N-07 Site : Mapas International (Thailand) Co., Ltd.
Date Analysis Commenced : Sep 05, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	2	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	≤750	APHA (2017), 520 D	Rayong
Oil & Grease	mg/L	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	7.1	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	30.1	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	<5	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Nattarat Channasaro

Remark :

- LOD : Limit of Detection
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Technical Management

N. Banphit
Narumon Banphongit
Supervisor
NIDUNARAT 7-323-n-9445

Approved by

D. Jumnas
Dej Changchon
Senior Manager
NIDUNARAT 7-323-n-9442

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HIGHT SOLUTIONS

488331 P/ML

8-Months A.G. as (Lab/Reg)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

TESTING
No.0042
Lot ID: 22118759
Date Received : Oct 12, 2022
Date Reported : Oct 12, 2022
Report Number : 2440056-1

Page 1 of 1

Sample Number	22118759-1			
Sampled Date	Oct 12, 2022	10:14 AM		
Sample Description	Wastewater			
Contract ID	L-ESIE_010_2552	Plot	N-07	Site
Date Analysis Commenced	Oct 12, 2022			
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)			
Physical Property	Yellow, some odour, a lot of solid and no turbid			

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤900	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	26	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	6.2	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	27.0	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	10	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Phitaya Thongtong

Remark :
* LOD : Limit of Detection
* <C : Lower than LOQ (Limit of Quantification) / LOR (Limit of Reporting)
* Analytical method * refers not included in scope of Accreditation ISO/IEC 17025.
* The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphit
Narumon Banchoingkit
Supervisor
Wattana Wattana 3-323-a-9445

Approved by

D. Chongchon
Dej Chongchon
Senior Manager
Wattana Wattana 3-323-a-9442

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RIGHT SOLUTIONS

4893111 EMAIL

51908001_ALS_Gen (1 25944)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

TESTING
No.0042
Lot ID: 22130055
Date Received : Nov 09, 2022
Date Reported : Nov 15, 2022
Report Number : 2474516-1

Page 1 of 1

Sample Number	22130055-1			
Sampled Date	Nov 09, 2022	3:30 PM		
Sample Description	Wastewater			
Contract ID	L-ESIE_010_2552	Plot	N-07	Site
Date Analysis Commenced	Nov 09, 2022			
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)			
Physical Property	Yellow, some odour, solid and no turbid			

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	6	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.8	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.9	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanisa Wongkajorn

Remark :
* LOD : Limit of Detection
* <C : Lower than LOQ (Limit of Quantification) / LOR (Limit of Reporting)
* Analytical method * refers not included in scope of Accreditation ISO/IEC 17025.
* The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphit
Narumon Banchoingkit
Supervisor
Wattana Wattana 3-323-a-9445

Approved by

D. Chongchon
Dej Chongchon
Senior Manager
Wattana Wattana 3-323-a-9442

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Analysis / Test Report

TESTING
No.0042

Lot ID: 22140083
Date Received : Dec 02, 2022
Date Reported : Dec 09, 2022
Report Number : 250477-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory Monthly

Project Location: ESIE

Page 1 of 1

Sample Number	22140083-1			
Sampled Date	Dec 02, 2022 11:30 AM			
Sample Description	Wastewater			
Contract ID	L ESIE 010 2552	Pilot	N-07	Site
Date Analysis Commenced	Dec 02, 2022			
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)			
Physical Property	Colorless, some odour, solid and no turbid			

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5200 B	Rayong
COD	mg/L	1.5	5	<5	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 B	Rayong
Oil & Grease *	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *	-	-	-	7.7	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.0	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central

Wastewater Treatment Plant

Sampled By : Tanasit Wongachai

Remark :

- LOD : Limit of Detection
- LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Bangphit

Narumon Bandongkiet

Supervisor

วณิชญานันท์ 7-323-9-9445

Approved by

D. Chongchon

Daj Chongchon

Senior Manager

วณิชญานันท์ 7-323-9-9442

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Singapore, AL (Pvt) (S 0899)



Analysis / Test Report

TESTING
No.0042

Lot ID: 2275355
Date Received : Jul 11, 2022
Date Reported : Jul 18, 2022
Report Number : 235068-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory Monthly

Project Location: ESIE

Page 1 of 1

Sample Number	2275355-1			
Sampled Date	Jul 11, 2022 10:40 AM			
Sample Description	Wastewater			
Contract ID	L ESIE 027 2557	Pilot	I-10	Site
Date Analysis Commenced	Jul 11, 2022			
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)			
Physical Property	Yellow, a lot of odour, solid and some turbid			

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	16	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	48	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	31.5	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	26	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central

Wastewater Treatment Plant

Sampled By : Narurat thammassaro

Remark :

- LOD : Limit of Detection
- LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Bangphit

Narumon Bandongkiet

Supervisor

วณิชญานันท์ 7-323-9-9445

Approved by

D. Chongchon

Daj Chongchon

Senior Manager

วณิชญานันท์ 7-323-9-9442

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Analysis / Test Report

TESTING
No.0042
Lot ID: 2288266

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
Date Received : Aug 03, 2022
Date Reported : Aug 09, 2022
Report Number : 2382947-1

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number : 2288266-1
Sampled Date : Aug 03, 2022 3:03 PM
Sample Description : Wastewater
Contract ID : LESIE_027_2557 Plot : 1-10 Site : NIPPON RUSSO (THAILAND) COMPANY LIMITED.
Date Analysis Commenced : Aug 03, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	2	18	≤500	APHA (2017), S210 B	Rayong
COD	mg/L	1.5	48	≤750	APHA (2017), S220 D	Rayong
Oil & Grease	mg/L	3	<3	≤10	Based on APHA (2017), S520 B	Rayong
pH (on site) *		-	7.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	31.5	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	14	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanisat Wongachai

Remark :
* LOD : Limit of Detection
* "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management

N. Banphit
Narumon Banchoongit
Supervisor
ติดต่อเรา 3-323-9-9445

Approved by

D. Jinnaw
Dej Changchon
Senior Manager
ติดต่อเรา 3-323-9-9442

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Analysis / Test Report

TESTING
No.0042
Lot ID: 22104271

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
Date Received : Sep 06, 2022
Date Reported : Sep 13, 2022
Report Number : 2414943-1

P/O :
Project Name : Random Check
Project Location : ESIE

Sample Number : 22104271-1

Sampled Date : Sep 06, 2022 2:16 PM

Sample Description : Wastewater

Contract ID : LESIE_027_2557 Plot : 1-10 Site : NIPPON RUSSO (THAILAND) COMPANY LIMITED.

Date Analysis Commenced : Sep 06, 2022

Condition of Sample : Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	2	3	≤500	APHA (2017), S210 B	Rayong
COD	mg/L	1.5	20	≤750	APHA (2017), S220 D	Rayong
Color (at Original pH)	ADMI	-	6	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	7	≤600	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	Not Detected	≤0.2	Based on APHA (2017), 4500-CN(C), (E)	Rayong
Formaldehyde	mg/L	0.03	0.1	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	7.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	APHA (2017), 5530 D	Rayong
Temperature *	Degree C	-	28.7	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	5	48	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	12	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Paramet Sattayakun , Thanasoun Namakurna

Remark :
* LOD : Limit of Detection
* "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
* Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
* The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphit
Narumon Banchoongit
Supervisor
ติดต่อเรา 3-323-9-9445

Approved by

D. Jinnaw
Dej Changchon
Senior Manager
ติดต่อเรา 3-323-9-9442

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Random Check

Project Location: ESIE

TESTING
No.0009

Lot ID: 22104271

Date Received : Sep 06, 2022

Date Reported : Sep 13, 2022

Report Number : 2414943-2

Page 1 of 1

Sample Number	22104271-1
Sampled Date	Sep 06, 2022 2:16 PM
Sample Description	Wastewater
Contract ID	L ESIE 027 2557
Plot	1-10
Site	NIPPON FUSSO (THAILAND) COMPANY LIMITED.
Date Analysis Commenced	Sep 07, 2022
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOQ)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	Not Detected	≤0.25	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.0003	0.0005	0.02	≤1.0	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.0003	0.0005	0.01	≤2.0	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Based on APHA (2017), 3500-Cr (B)	Bangkok
Lead	mg/L	0.0003	0.0005	0.001	≤0.2	Based on APHA (2017), 3125	Bangkok
Manganese	mg/L	0.0003	0.0005	0.02	≤5.0	Based on APHA (2017), 3125	Bangkok
Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.005	Based on US EPA, Method 1631 Revision E	Bangkok
Nickel	mg/L	0.0003	0.0005	0.002	≤1.0	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	≤0.02	Based on APHA (2017), 3125	Bangkok
Trivalent Chromium *	mg/L	-	0.01	0.01	≤0.75	Based on APHA (2017), Calculated	Bangkok
Zinc	mg/L	0.003	0.005	0.03	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant.

Sampled By : Paramet Sattayakun , Thanasoun Namakunna

Remark :
- LOD : Limit of Detection
- <LOQ : Lower than LOQ (Limit of Quantitation) / LOQ (Limit of Reporting)
- <L : Analyte(s) marked * ignore not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management
Savitree N.
Savitree Nonsinglam
Manager
โทรศัพท์ 2-204-4-4709

Approved by
Kanokorn Anek
Kanokorn Anek
Senior Manager
โทรศัพท์ 2-204-4-6111

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ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10950 Thailand / PHONE: 466 0 2760 3000 / FAX: 466 0 2760 3197
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S:Shangm, AL, CA, JET (23389)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Random Check

Project Location: ESIE

TESTING
No.0042

Lot ID: 22104271

Date Received : Sep 06, 2022

Date Reported : Sep 13, 2022

Report Number : 2414943-3

Page 1 of 1

Sample Number	22104271-1
Sampled Date	Sep 06, 2022 2:16 PM
Sample Description	Wastewater
Contract ID	L ESIE 027 2557
Plot	1-10
Site	NIPPON FUSSO (THAILAND) COMPANY LIMITED.
Date Analysis Commenced	Sep 07, 2022
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOQ)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Iron	mg/L	0.003	0.005	0.20	≤10.0	Based on APHA (2017), 3125	Bangkok
Water Testing							
Fluoride	mg/L	0.05	0.2	<0.2	≤5	APHA (2017), 4500-F(C)	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant.

Sampled By : Paramet Sattayakun , Thanasoun Namakunna

Remark :
- LOD : Limit of Detection
- <LOQ : Lower than LOQ (Limit of Quantitation) / LOQ (Limit of Reporting)
- <L : Analyte(s) marked * ignore not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, DSS Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by
Dhanu
Daj Changchon
Senior Manager

ADDRESS 616/10 Moo 5 T. Maenam Khu A. Pluakdaeng Rayong 21140 Thailand / PHONE: 466 0 3104 8555 / FAX: 466 0 3104 8556
ALS LABORATORY GROUP (THAILAND) CO., LTD. AN ALS LIMITED COMPANY

Life Sciences

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480-54 ENAL

S:Shangm, AL, CA, JET (23389)

บริษัท อีสเทิร์น ซีบอร์ด อินดัสเตรียล เอสเตท (ระยอง) จำกัด
Eastern Seaboard Industrial Estate(Rayong) Company Limited

Wastewater Treatment Service Charges

Customer: NIPPON FUSSO (THAILAND) COMPANY LIMITED
Location: 1-10
Billing Period: Oct/2022
Cx = Excursion factor[(5.52 Vx) + (11.05 Bx)] + LAB FEE

Line 1	BOD Concentration (mg/l)	3.0000	=	0.0030000 (kg/m ³)	See report from ALS
Line 2	Lab Fees (Baht)	0.00			See invoice from ALS, price before VAT
Line 3	Calculating Vx				
	Potable Water	46.00	x	0.80	= 36.80 (m ³)
	Potable Water	73.00	x	0.80	= 58.40 (m ³)
			x		= (m ³)
			x		= (m ³)
Line 4	Total Vx				= 95.20 (m ³)
Line 5	5.52 Vx				= 5.52 (Baht/m ³)
				Unit Rate	x
					= 525.50 (Baht)
Line 6	Bx = BOD x Vx	0.0030000	x	95.20	= 0.29 (Baht)
				Unit Rate	x
					= 11.05
Line 7	11.05 Bx				= 3.20 (Baht)
	COST = Line 5 + Line 6				= 528.70
Line 8	EXCURSION Factor			(BOD not exceeding limited)	x
					= 1.00
Line 9	TOTAL COST				= 528.70 (Baht)
Line 10	LAB FEES = Line 2				= 0.00 (Baht)
Line 11	UTILITY COST Cx = Line 7 + Line 8			before VAT	= 528.70 (Baht)

Remark: Number of times exceeding quality standard in the last 24 months = 1
REPORTED BY: [Signature]
CHECKED BY: [Signature]



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location : ESIE

Sample Number: 22104271-1
Sample Date: Sep 06, 2022 2:16 PM
Sample Description: Wastewater
Contract ID: LESIE-027_2557 Plot: 1-10 Site: NIPPON FUSSO (THAILAND) COMPANY LIMITED.
Date Analysis Commenced: Sep 06, 2022
Condition of Sample: Contained in two glass vials, one amber glass bottle and seven plastic bottles; sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property: Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	3	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	20	≤750	APHA (2017), 520 D	Rayong
Color (at Original pH)	ADMI	-	5	6	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	7	≤600	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	0.005	Not Detected	≤0.2	Based on APHA (2017), 4500-CN(C), (E)	Rayong
Formaldehyde	mg/L	0.03	0.1	0.1	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1	APHA (2017), 5530 D	Rayong
Temperature *	Degree C	-	-	28.7	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	48	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	12	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Paramit Sattayakum , Thanasoun Namakuma

Remark :
- LOD : Limit of Detection
- "C" : Lower than LOQ (Limit of Quantitation) / LQR (Limit of Reporting)
- Analyzed (S) marked * : Have not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management: N. Banpait
Supervisor: Natamon Banchoangit
Vatthanasri 7-323-9-9445
Approved by: [Signature]
Dej Chingchon
Senior Manager
Watthanasri 7-323-9-9442

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080-5410101

S. Sriporn, M. B. 011 13300



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location : ESIE

TESTING
No.0009
Lot ID: 22104271
Date Received : Sep 06, 2022
Date Reported : Sep 13, 2022
Report Number : 2414943-2

Sample Number 22104271-1
Sample Date Sep 06, 2022 2:16 PM
Sample Description Wastewater
Contract ID LESIE_027_2557 Plot 1-10 Site NIPPON FUSO (THAILAND) COMPANY LIMITED.
Date Analysis Commenced Sep 07, 2022
Condition of Sample Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOQ (LOQ)	Result	Guideline / Specification	Method	Testing Location
Metals Testing						
Arsenic	mg/L	0.0003	0.0005	Not Detected	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.0003	0.0005	0.02	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.0003	0.0005	0.01	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	Based on APHA (2017), 3500-Cr (B)	Bangkok
Lead	mg/L	0.0003	0.0005	0.001	Based on APHA (2017), 3125	Bangkok
Manganese	mg/L	0.0003	0.0005	0.02	Based on APHA (2017), 3125	Bangkok
Mercury	mg/L	0.0001	0.0005	Not Detected	Based on USEPA, Method 1631, Revision E	Bangkok
Nickel	mg/L	0.0003	0.0005	0.002	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	Based on APHA (2017), 3125	Bangkok
Trivalent Chromium *	mg/L	-	0.01	0.01	Based on APHA (2017), Calculated	Bangkok
Zinc	mg/L	0.003	0.005	0.03	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Paramet Sattayakun, Thanassou Namakuma

Remark :
- LOD : Limit of Detection
- "c" : Lower than LOQ (Limit of Quantification) / LOQ (Limit of Reporting)
- Analyte(s) marked * ignore not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management
Savitree N.
Sanitree Nongnang
Manager
โทรศัพท์ 7-204-47199

Approved by
Korakorn Anuk
Senior Manager
โทรศัพท์ 7-204-6-6111

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RIGHT SOLUTIONS. FOCUS ON YOUR NEEDS.
400-541 0146
S. (Singapore), M. (Malaysia)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location : ESIE

TESTING
No.0042
Lot ID: 22104271
Date Received : Sep 06, 2022
Date Reported : Sep 13, 2022
Report Number : 2414943-3

Sample Number 22104271-1
Sample Date Sep 06, 2022 2:16 PM
Sample Description Wastewater
Contract ID LESIE_027_2557 Plot 1-10 Site NIPPON FUSO (THAILAND) COMPANY LIMITED.
Date Analysis Commenced Sep 07, 2022
Condition of Sample Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOQ (LOQ)	Result	Guideline / Specification	Method	Testing Location
Metals Testing						
Iron	mg/L	0.003	0.005	0.20	Based on APHA (2017), 3125	Bangkok
Water Testing Fluoride	mg/L	0.05	0.2	<0.2	APHA (2017), 4500-F(C)	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Paramet Sattayakun, Thanassou Namakuma

Remark :
- LOD : Limit of Detection
- "c" : Lower than LOQ (Limit of Quantification) / LOQ (Limit of Reporting)
- Analyte(s) marked * ignore not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, ISO Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by
Def. Changchon
Senior Manager

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S. (Singapore), M. (Malaysia)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number 22130078-1
Sampled Date Nov 09, 2022 2:15 PM
Sample Description Wastewater
Contract ID L-ESIE_027_2557 Plot 1-10 Site NIPPON RUSSO (THAILAND) COMPANY LIMITED.
Date Analysis Commenced Nov 09, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	49	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	193	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.8	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	90	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongsachai

Remark :

- LOD : Limit of Detection
- "L" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management

N. Banphit

Narumon Banchongkitt
Supervisor

โทรศัพท์ 3-323-9-9445

Approved by

D. Chanchon

Daj Chanchon
Senior Manager

โทรศัพท์ 3-323-9-9442

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number 22140102-1
Sampled Date Dec 02, 2022 3:52 PM
Sample Description Wastewater
Contract ID L-ESIE_027_2557 Plot 1-10 Site NIPPON RUSSO (THAILAND) COMPANY LIMITED.
Date Analysis Commenced Dec 02, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	40	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	139	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.8	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	40	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Parameet Sattayakun

Remark :

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Technical Management

N. Banphit

Narumon Banchongkitt
Supervisor

โทรศัพท์ 3-323-9-9445

Approved by

D. Chanchon

Daj Chanchon
Senior Manager

โทรศัพท์ 3-323-9-9442

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Analysis / Test Report

TESTING
No.0042
Lot ID: 2275306

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
Date Received : Jul 08, 2022
Date Reported : Jul 15, 2022
Report Number: 2349881-1

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 1 of 1

Sample Number	2275306-1						
Sampled Date	Jul 08, 2022 2:10 PM						
Sample Description	Wastewater						
Contract ID	L-ESIE_007_2552	Plot	L-13	Site	Taiyo Gases Co., Ltd.		
Date Analysis Commenced	Jul 08, 2022						
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)						
Physical Property	Yellow, a lot of odour, some solid and turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	98	≤500	APHA (2017), §210 B	Rayong
COD	mg/L	1.5	5	249	≤750	APHA (2017), §220 D	Rayong
Oil & Grease	mg/L	-	3	10	≤10	Based on APHA (2017), §520 B	Rayong
pH (on site) *	-	-	-	8.0	5.5-9.0	Based on APHA (2017), §500-H (B)	Rayong
Temperature *	Degree C	-	-	30.9	≤45	Based on APHA (2017), §2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	71	≤200	APHA (2017), §2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Thaisak Wongachai

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management

N. Banphat
Narumon Banchoangkit
Supervisor
ติดต่อ : ๐๖-๓๓๐๔-๘๕๕๕

Approved by

D. Chuan
Dej Changchon
Senior Manager
ติดต่อ : ๐๖-๓๓๐๔-๘๕๕๕

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Analysis / Test Report

TESTING
No.0042
Lot ID: 2288195

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
Date Received : Aug 01, 2022
Date Reported : Aug 08, 2022
Report Number: 2382708-1

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 1 of 1

Sample Number	2288195-1						
Sampled Date	Aug 01, 2022 9:05 AM						
Sample Description	Wastewater						
Contract ID	L_ESIE_007_2552	Plot	L-13	Site	Taiyo Gases Co., Ltd.		
Date Analysis Commenced	Aug 01, 2022						
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)						
Physical Property	Yellow, a lot of odour, some solid and turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	79	≤500	APHA (2017), §210 B	Rayong
COD	mg/L	1.5	5	210	≤750	APHA (2017), §220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Based on APHA (2017), §520 B	Rayong
pH (on site) *	-	-	-	7.8	5.5-9.0	Based on APHA (2017), §500-H (B)	Rayong
Temperature *	Degree C	-	-	29.9	≤45	Based on APHA (2017), §2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	45	≤200	APHA (2017), §2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Thaisak Wongachai

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management

N. Banphat
Narumon Banchoangkit
Supervisor
ติดต่อ : ๐๖-๓๓๐๔-๘๕๕๕

Approved by

D. Chuan
Dej Changchon
Senior Manager
ติดต่อ : ๐๖-๓๓๐๔-๘๕๕๕

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Analysis / Test Report

TESTING

No.0042
Lot ID: 22104342

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
Date Received : Sep 05, 2022
Date Reported : Sep 12, 2022
Report Number : 241546-1

P/O :

Project Name : Factory / Monthly

Project Location: ESIE

Page 1 of 1

Sample Number	22104342-1
Sampled Date	Sep 05, 2022 2:54 PM
Sample Description	Wastewater
Contract ID	L_ESIE_007_2552
Plot	L-13
Site	Taiyo Gases Co., Ltd.
Date Analysis Commenced	Sep 05, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Brown, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	186	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	636	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	17	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	9.1	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.8	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	161	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Wanlop Thachalinnaw

Remark :

- * LOD : Limit of Detection
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Technical Management

N. Bangphit

Narumon Banchongkitt
Supervisor

โทรศัพท์มือถือ : 09-223-9-9445

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

โทรศัพท์มือถือ : 09-223-9-9442

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5-Miscellaneous (13/09/20)



Analysis / Test Report

TESTING

No.0042
Lot ID: 22118721

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
Date Received : Oct 03, 2022
Date Reported : Oct 10, 2022
Report Number : 2447898-1

P/O :

Project Name : Random Check

Project Location: ESIE

Page 1 of 1

Sample Number	22118721-1
Sampled Date	Oct 03, 2022 10:03 AM
Sample Description	Wastewater
Contract ID	L_ESIE_007_2552
Plot	L-13
Site	Taiyo Gases Co., Ltd.
Date Analysis Commenced	Oct 03, 2022
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	37	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	170	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	111	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	110	≤600	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	0.005	Not Detected	≤0.2	Based on APHA (2017), 4500-CN(C), (C)	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	3	3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	8.0	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	<0.010	≤1	APHA (2017), 5530 D	Rayong
Temperature *	Degree C	-	-	28.2	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	412	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	52	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongsaichai, Thanassoun Namakurina

Remark :

- * LOD : Limit of Detection
- * "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- * Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
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Technical Management

N. Bangphit

Narumon Banchongkitt
Supervisor

โทรศัพท์มือถือ : 09-223-9-9445

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

โทรศัพท์มือถือ : 09-223-9-9442

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5-Miscellaneous (13/09/20)



Analysis / Test Report

TESTING
No.0009
Lot ID: 22118721
Date Received : Oct 03, 2022
Date Reported : Oct 10, 2022
Report Number : 2447898-2

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location: ESIE

Page 1 of 1

Sample Number	22118721-1
Sample Date	Oct 03, 2022 10:03 AM
Sample Description	Wastewater
Contract ID	L-ESIE_007_2552
Plot	L-13
Site	Taiyo Gases Co., Ltd.
Date Analysis Commenced	Oct 04, 2022
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing						
Arsenic	mg/L	0.0003	0.0005	0.002	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.0003	0.0005	0.07	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.0003	0.0005	0.03	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	<0.01	Based on APHA (2017), 3500-Cr (3)	Bangkok
Lead	mg/L	0.0003	0.0005	0.002	Based on APHA (2017), 3125	Bangkok
Manganese	mg/L	0.0003	0.0005	0.06	Based on APHA (2017), 3125	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	Based on APHA (2017), 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.004	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	Based on APHA (2017), 3125	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	Based on APHA (2017), Calculated	Bangkok
Zinc	mg/L	0.003	0.005	0.42	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongsachai, Thanassoun Namakunna

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Technical Management

Savitree N.
Savitree Naisrangam
Manager
Tel:0914888888 7-204-4-4709

Approved by

Kanokorn Anuk.
Senior Manager
Tel:0914888888 7-204-4-6111

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Analysis / Test Report

TESTING
No.0042
Lot ID: 22118721
Date Received : Oct 03, 2022
Date Reported : Oct 10, 2022
Report Number : 2447898-3

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location: ESIE

Page 1 of 1

Sample Number	22118721-1
Sample Date	Oct 03, 2022 10:03 AM
Sample Description	Wastewater
Contract ID	L-ESIE_007_2552
Plot	L-13
Site	Taiyo Gases Co., Ltd.
Date Analysis Commenced	Oct 04, 2022
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing						
Iron	mg/L	0.003	0.005	0.40	Based on APHA (2017), 3125	Bangkok
Fluoride	mg/L	0.05	0.2	<0.2	APHA (2017), 4500-F(C)	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongsachai, Thanassoun Namakunna

Remark :
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Approved by

Dej Changchon
Senior Manager

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Analysis / Test Report

TESTING
No.0042

Lot ID: 22130014

Date Received : Nov 04, 2022

Date Reported : Nov 10, 2022

Report Number : 2474089-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.

112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong

Thailand 21140

P/O : Project Name : Factory / Monthly

Project Location: ESIE

Page 1 of 1

Sample Number	22130014-1
Sampled Date	Nov 04, 2022 8:55 AM
Sample Description	Wastewater
Contract ID	L ESIE 007 2552
Plot	L-13
Site	Taiyo Gases Co., Ltd.
Date Analysis Commenced	Nov 04, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	69	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	280	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	8.1	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	26.7	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	83	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Panameet Sattayakuln

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Technical Management

Thanitak.
Thantita Kulniruwong
Scientist (4)

Approved by

Dej Changchon
Senior Manager

Wattanaeewi 7-323-a-9447

Wattanaeewi 7-323-a-9442

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8-Vapornit_Als_Epi (4-2009)



Analysis / Test Report

TESTING
No.0042

Lot ID: 22140051

Date Received : Dec 06, 2022

Date Reported : Dec 12, 2022

Report Number : 2504403-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.

112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong

Thailand 21140

P/O : Project Name : Factory / Monthly

Project Location: ESIE

Page 1 of 1

Sample Number	22140051-1
Sampled Date	Dec 06, 2022 10:25 AM
Sample Description	Wastewater
Contract ID	L ESIE 007 2552
Plot	L-13
Site	Taiyo Gases Co., Ltd.
Date Analysis Commenced	Dec 06, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	100	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	236	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *	-	-	-	7.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.8	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	56	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Chainusorn Letthathakuln

Remark :

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Technical Management

N. Banphit
Narumon Banchoogit
Supervisor

Approved by

Dej Changchon
Senior Manager

Wattanaeewi 7-323-a-9445

Wattanaeewi 7-323-a-9442

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Analysis / Test Report

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Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

TESTING
No 0042
Lot ID: 2275315
Date Received : Jul 08, 2022
Date Reported : Jul 15, 2022
Report Number: 2349894-J

Page 1 of 1

Sample Number 2275315-1
Sample Date Jul 08, 2022 3:05 PM
Sample Description Wastewater
Contract ID L ESIE_011_2551 Plot PK-13 Site AUMDE (Thailand) Co., Ltd.
Date Analysis Commenced Jul 08, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some colour, solid and turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	44	<500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	146	<750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	10	<10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.9	<45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	36	<200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Wanlop Ilumchanaow

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Technical Management

N. Bangkit
Supervisor
โทรศัพท์ 03-323-9945

Approved by

D. J. Changchon
Senior Manager
โทรศัพท์ 03-323-9942

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
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Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

TESTING
No.0042
Lot ID: 2288204
Date Received : Aug 01, 2022
Date Reported : Aug 08, 2022
Report Number: 2382727-1

Page 1 of 1

Sample Number 2288204-1
Sample Date Aug 01, 2022 10:12 AM
Sample Description Wastewater
Contract ID L ESIE_011_2551 Plot PK-13 Site AUMDE (Thailand) Co., Ltd.
Date Analysis Commenced Aug 01, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a bit of colour, solid and turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	32	<500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	124	<750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	<10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.3	5.5-9.0	Based on APHA (2017), 4500 H (B)	Rayong
Temperature *	Degree C	-	-	30.4	<45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	29	<200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Tanasit Wongpanhai

Remark :
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Technical Management

N. Bangkit
Supervisor
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Approved by

D. J. Changchon
Senior Manager
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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
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Thailand 21140

P/O :
Project Name : Random Check
Project Location : ESIE

Page 1 of 1

Sample Number	22104267-1
Sample Date	Sep 02, 2022 9:14 AM
Sample Description	Wastewater
Contract ID	L ESIE 011_2551 Plot PK-13 Site AUNDE (Thailand) Co., Ltd.
Date Analysis Commenced	Sep 02, 2022
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	Result	LOQ (LOR)	Guideline / Specification	Method	Testing Location
Water Testing							Rayong
BOD (5 days at 20 Degree C)	mg/L	-	28	-	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	119	-	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	71	-	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	69	-	≤600	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	Not Detected	-	≤0.2	Based on APHA (2017), 4500-CNC, (E)	Rayong
Formaldehyde	mg/L	0.03	0.1	-	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	6	-	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	7.1	-	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.08	-	≤1	APHA (2017), 5530 D	Rayong
Temperature *	Degree C	-	29.6	-	≤45	Based on APHA (2017), 2540 B	Rayong
Total Dissolved Solids Dried at 180 Degree C	mg/L	-	312	-	≤5000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 102-105 Degree C	mg/L	-	21	-	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pittaya Thonglaeng, Nantawat Sain

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Technical Management

N. Banphit

Nannorn Bandhongkit
Supervisor
Watthana 11-3123-9-9445

Approved by

D. Chongchon

Dej Chongchon
Senior Manager
Watthana 11-3123-9-9442

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ANALYST : PITTAYA THONGLAENG, NANTAWAT SAIN
LABORATORY : ALS LABORATORY (THAILAND) CO., LTD.
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48-14 ENA

48-14 ENA



Analysis / Test Report

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Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number	22118744-1
Sample Date	Oct 11, 2022 10:35 AM
Sample Description	Wastewater
Contract ID	L ESIE 011_2551 Plot PK-13 Site AUNDE (Thailand) Co., Ltd.
Date Analysis Commenced	Oct 11, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	Result	LOQ (LOR)	Guideline / Specification	Method	Testing Location
Water Testing							Rayong
BOD (5 days at 20 Degree C)	mg/L	-	77	-	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	323	-	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	14	-	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	7.3	-	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	28.7	-	≤45	Based on APHA (2017), 2540 B	Rayong
Total Suspended Solids Dried at 102-105 Degree C	mg/L	-	171	-	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongpachal

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Technical Management

Tharitat

Thalia Kusujumong
Scientist (4)
Watthana 11-3123-9-9447

Approved by

D. Chongchon

Dej Chongchon
Senior Manager
Watthana 11-3123-9-9442

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ANALYST : TANASIT WONGPACHAL
LABORATORY : ALS LABORATORY (THAILAND) CO., LTD.
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HIGH SOLUTIONS

48-14 ENA

48-14 ENA



Analysis / Test Report

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112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location: ESIE

TESTING
No.0042
Lot ID: 2234912
Date Received : Apr 01, 2022
Date Reported : Apr 08, 2022
Report Number: 2264145-1

Page 1 of 1

Sample Number	2234912-1
Sampled Date	Apr 01, 2022 9:41 AM
Sample Description	Wastewater
Contract ID	L-ESIE 018_2556
Plot	B-28
Site	Logicom International (Thailand) Co., Ltd.
Date Analysis Commenced	Apr 01, 2022
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles. Sample containers comply to pretreatment -
Physical Property	Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	51	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	130	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMT	-	5	89	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMT	-	5	86	≤600	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	0.005	<0.005	≤0.2	Based on APHA (2017), 4500-CH(CN) (C)	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	0.07	≤1	APHA (2017), 5530 D	Rayong
Temperature *	Degree C	-	-	31.1	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	256	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	28	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pithaya Thongdaeng , Thamassou Namakunna

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Technical Management :
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Nerumon Banphongkit
Supervisor
wadanaunai 3-323-a-9445

Approved by :
D. Chongchon
Dej Chongchon
Supervisor
wadanaunai 3-323-a-9442

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location: ESIE

TESTING
No.0009
Lot ID: 2234912
Date Received : Apr 01, 2022
Date Reported : Apr 08, 2022
Report Number: 2264145-2

Page 1 of 1

Sample Number	2234912-1
Sampled Date	Apr 01, 2022 9:41 AM
Sample Description	Wastewater
Contract ID	L-ESIE 018_2556
Plot	B-28
Site	Logicom International (Thailand) Co., Ltd.
Date Analysis Commenced	Apr 04, 2022
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles. Sample containers comply to pretreatment -
Physical Property	Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.001	≤0.25	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.0003	0.0005	0.11	≤1.0	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.0003	0.0005	<0.0005	≤0.03	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.0003	0.0005	0.03	≤2.0	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Based on APHA (2017), 3500-Cr (B)	Bangkok
Lead	mg/L	0.0003	0.0005	0.004	≤0.2	Based on APHA (2017), 3125	Bangkok
Manganese	mg/L	0.0003	0.0005	0.06	≤5.0	Based on APHA (2017), 3125	Bangkok
Mercury *	mg/L	0.0001	0.0005	0.0006	≤0.005	Based on APHA (2017), 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.008	≤1.0	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	≤0.02	Based on APHA (2017), 3125	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	Based on APHA (2017), Calculated	Bangkok
Zinc	mg/L	0.003	0.005	0.62	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pithaya Thongdaeng , Thamassou Namakunna

Remark :
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- <C_R : Lower than LOQ (Unit of Quantitation) / LOR (Unit of Reporting)
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Technical Management :
Savitree N.
Savitree Naisanglam
Assistant Manager
wadanaunai 3-204-a-1709

Approved by :
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Senior Manager
wadanaunai 3-204-a-6111

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location: ESIE



TESTING
No.0042
Lot ID: 2234912
Date Received : Apr 01, 2022
Date Reported : Apr 08, 2022
Report Number: 2264145-3

Page 1 of 1

Sample Number 2234912-1
Sampled Date Apr 01, 2022 9:41 AM
Sample Description Wastewater
Contract ID L ESIE 018, 2556 Plot B-28 Site Logicom International (Thailand) Co., Ltd.
Date Analysis Commenced Apr 02, 2022
Condition of Sample Contained in two glass vials, one amber glass bottle and seven plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Iron	mg/L	0.003	0.005	0.60	≤10.0	Based on APHA (2017), 3125	Bangkok
Water Testing							
Fluoride	mg/L	0.05	0.2	<0.2	≤5	APHA (2017), 4500-F(C)	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pittaya Thongdaeng , Thanasoun Namakunna

Remark :
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- [A] : Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, DSS Accreditation No. 0009.

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Thailand 21140

P/O :
Project Name : Factory Monthly
Project Location: ESIE



TESTING
No.0042
Lot ID: 22140091
Date Received : Dec 06, 2022
Date Reported : Dec 12, 2022
Report Number : 2504998-1

Page 1 of 1

Sample Number 22140091-1
Sampled Date Dec 06, 2022 9:45 AM
Sample Description Wastewater
Contract ID L ESIE 050, 2550 Plot S-29F Site SHPP (THAILAND) Co., Ltd.
Date Analysis Commenced Dec 06, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	9	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	34	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	7.7	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.3	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Parameet Sattayakun

Remark :
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Technical Management

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Narumon Banphit
Supervisor

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Analysis / Test Report

TESTING
No.0042

Lot ID: 22118767
Date Received : Oct 12, 2022
Date Reported : Oct 17, 2022
Report Number : 2448150-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location: ESIE

Page 1 of 1

Sample Number	22118767-1
Sample Date	Oct 12, 2022 4:40 PM
Sample Description	Wastewater
Contract ID	L ESIE 050_2550
Plot	S-29F
Site	SHPP (THAILAND) CO.,LTD.
Date Analysis Commenced	Oct 12, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	8	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	56	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Based on APHA (2017), 4500 H (B)	Rayong
Temperature *	Degree C	-	-	31.8	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	29	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tarasit Wongsochul

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TESTING
No.0042

Lot ID: 22130065
Date Received : Nov 11, 2022
Date Reported : Nov 17, 2022
Report Number : 2474556-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
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Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location: ESIE

Page 1 of 1

Sample Number	22130065-1
Sample Date	Nov 11, 2022 10:14 AM
Sample Description	Wastewater
Contract ID	L ESIE 050_2550
Plot	S-29F
Site	SHPP (THAILAND) CO.,LTD.
Date Analysis Commenced	Nov 11, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	10	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	59	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	8	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	6.9	5.5-9.0	Based on APHA (2017), 4500 H (B)	Rayong
Temperature *	Degree C	-	-	29.3	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	22	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pannart Sattayakun

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P/O :

Project Name : Factory / Monthly

Project Location : ESIE

Page 1 of 1

Sample Number : 2288254-1
Sample Date : Aug 11, 2022 7:45 PM
Sample Description : Wastewater
Contract ID : L_ESIE_050_2550 **Plot** : S-29F **Site** : SHPP (THAILAND) Co., Ltd.
Date Analysis Commenced : Aug 11, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	16	≤500	APHA (2017), S210 B	Rayong
COD	mg/L	1.5	5	97	≤750	APHA (2017), S220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), S520 B	Rayong
pH (on site) *		-	-	7.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	27	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Naurat thammavaro

Remark :

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Technical Management

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S. Wongsakul, B.Sc. (131194)



Analysis / Test Report

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Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location : ESIE

Page 1 of 1

Sample Number : 21150433-1
Sample Date : Jan 10, 2022 10:39 AM
Sample Description : Wastewater
Contract ID : L_ESIE_048_2550 **Plot** : S-38 **Site** : Gates Unit (Thailand) Co., Ltd.
Date Analysis Commenced : Jan 10, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	1.2	≤500	APHA (2017), S210 B	Rayong
COD	mg/L	1.5	5	49	≤750	APHA (2017), S220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Based on APHA (2017), S520 B	Rayong
pH (on site) *		-	-	7.2	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	40.6	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 Degree C	mg/L	-	5	6	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pittaya Thungjaeng

Remark :

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Technical Management

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Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

TESTING
No.0042
Lot ID: 2110671
Date Received : Feb.10, 2022
Date Reported : Feb.16, 2022
Report Number : 2210671-1

Page 1 of 1

Sample Number : 2210671-1
Sample Date : Feb.10, 2022 10:00 AM
Sample Description : Wastewater
Contract ID : L-ESIE-048-2550 Plot : S-36 Site : Gates Unitra (Thailand) Co., Ltd.
Date Analysis Commenced : Feb.10, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odor, solid and some turbid

Analyte	Unit	LOD	LOQ (LOI)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	32	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	82	≤250	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.4	5.5-9.0	Based on APHA (2017), 4500 H (B)	Rayong
Temperature *	Degree C	-	-	36.9	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 Degree C	mg/L	-	5	18	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant.
Sampled By : Watsap Huchlunaw

Remark :
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* LOQ : Lower than LOQ (Limit of Quantitation) / LOI (Limit of Reporting)
* Result(s) marked * figure not included in scope of Accreditation ISO/IEC 17025.

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Analysis / Test Report

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Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

TESTING
No.0042
Lot ID: 2222443
Date Received : Mar.04, 2022
Date Reported : Mar.10, 2022
Report Number : 2222443-1

Page 1 of 1

Sample Number : 2222443-1
Sample Date : Mar.04, 2022 9:33 AM
Sample Description : Wastewater
Contract ID : L-ESIE-048-2550 Plot : S-36 Site : Gates Unitra (Thailand) Co., Ltd.
Date Analysis Commenced : Mar.04, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odor, solid and some turbid

Analyte	Unit	LOD	LOQ (LOI)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	28	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	89	≤250	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.4	5.5-9.0	Based on APHA (2017), 4500 H (B)	Rayong
Temperature *	Degree C	-	-	39.2	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 Degree C	mg/L	-	5	9	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant.
Sampled By : Chutimon Lerttarnkumchul

Remark :
* LOD : Limit of Detection
* LOQ : Lower than LOQ (Limit of Quantitation) / LOI (Limit of Reporting)
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Technical Management

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D. Chongchong

Dig Chongchong
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Wichaiwan 1-323-m-9442

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Thailand 21140

P/O: Project Name : Factory / Monthly
Project Location: ESIE

TESTING
No.0042
Lot ID: 2234983
Date Received : Apr 04, 2022
Date Reported : Apr 11, 2022
Report Number : 226405-1

Page 1 of 1

Sample Number 2234983-1
Sample Date Apr 04, 2022 11:10 AM
Sample Description Wastewater
Contract ID L-ESIE-086-2550
Site Gates Unit (Thailand) Co., Ltd.
Date Analysis Commenced Apr 04, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of colour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	50	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	122	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.4	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	34.7	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 102-105 degree C	mg/L	-	5	15	≤200	APHA (2017), 2540 D	Rayong

Guideline: Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By: Narutorn Thammassano

Remark:
- LOD : Limit of Detection
- "≤": Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analytic(s) method : refers not included in scope of Accreditation ISO/IEC 17025.

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403-347-0040

31/05/2022, ALS (P) 1/2022



Analysis / Test Report

Client: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O: Project Name : Random Check
Project Location: ESIE

TESTING
No.0042
Lot ID: 2249441
Date Received : May 04, 2022
Date Reported : May 11, 2022
Report Number : 2297108-1

Page 1 of 1

Sample Number 2249441-1
Sample Date May 04, 2022 9:42 AM
Sample Description Wastewater
Contract ID L-ESIE-086-2550
Site Gates Unit (Thailand) Co., Ltd.
Date Analysis Commenced May 04, 2022
Condition of Sample Contained in one amber glass bottle, seven plastic bottles and two glass vials. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of colour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	33	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	175	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADU/L	-	5	75	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADU/L	-	5	72	≤600	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	0.005	Not Detected	≤0.2	Based on APHA (2017), 4500-CN(C), (E)	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Based on APHA (2017), 5520 B	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	0.01	≤1	Based on APHA (2017), 5530 D	Rayong
Temperature *	Degree C	-	-	33.6	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	220	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 102-105 degree C	mg/L	-	5	19	≤200	APHA (2017), 2540 D	Rayong

Guideline: Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By: Porntorn Sakayekun, Thanasorn Namakulnara

Remark:
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- "≤": Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analytic(s) method : refers not included in scope of Accreditation ISO/IEC 17025.

Technical Management

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403-347-0040

31/05/2022, ALS (P) 1/2022



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Sample Number : 2259572-1
Sampled Date : Jun 09, 2022 9:45 AM
Sample Description : Wastewater
Contract ID : L-ESIE-048-2550 Plot : S-36 Site : Gais Unitta (Thailand) Co., Ltd.
Date Analysis Commenced : Jun 09, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, a lot of odour, some solid and no turbid

Page 1 of 1

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 degree C)	mg/L	-	2	15	≤500	APHA (2017), S210 B	Rayong
COD	mg/L	1.5	5	31	≤750	APHA (2017), S220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), S260 B	Rayong
pH (on site) *	-	-	-	7.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature +	Degree C	-	-	35.1	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pitthaya Thonglaeng

Remark :

- * LOD : Limit of Detection
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480 331 4400

S. Sripetch, M. S. Sripetch



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Sample Number : 2275273-1
Sampled Date : Jul 12, 2022 10:07 AM
Sample Description : Wastewater
Contract ID : L-ESIE-048-2550 Plot : S-36 Site : Gais Unitta (Thailand) Co., Ltd.
Date Analysis Commenced : Jul 12, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, a lot of odour, solid and some turbid

Page 1 of 1

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 degree C)	mg/L	-	2	34	≤500	APHA (2017), S210 B	Rayong
COD	mg/L	1.5	5	98	≤750	APHA (2017), S220 D	Rayong
Oil & Grease	mg/L	-	3	9	≤10	Based on APHA (2017), S260 B	Rayong
pH (on site) *	-	-	-	7.0	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	42.2	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	20	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pitthaya Thonglaeng

Remark :

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- * LOR : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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480 331 4400

S. Sripetch, M. S. Sripetch



Analysis / Test Report

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112 Moo 4, Highway 331 Road, Tamnint Puakdang, Amphur Puakdang, Rayong
Thailand 21140

P/O :

Lot ID : 2288164

Date received : Aug 08, 2022

Date reported : Aug 15, 2022

Report Number : 2282457-1

Report Number : 2382457-1

Page 1 of 1

Sample Number	Analyte	Unit	LOD	LOD (LOR)	Result	Guideline / Specification	Method	Testing Location
2283464-1	Water Testing							
Sampled Date	Aug 08, 2022 10:00 AM			-	2	14	<500	Roying
Sample Description	Wastewater			1.5	5	78	<750	Roying
Contact ID	L_ESE_OHG_2550			-	3	5	<10	Roying
Date Analysis Commenced	Aug 08, 2022			-	-	7.3	5.5-9 H	Roying
Date of Sample				-	-	36.6	<5	Roying
Condition of Sample:	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA).			-	-	15	<200	Roying
Physical Property	* Yellow, a bit of cloud, solid and turbid			5				Roying
	TOTAL SPOURED SOLIDS Dried at 175°C for 105 days C.							

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Parameet Sittayaphun

Remark 1

LOD	Units of Detection
LOQ	Units of Quantification (OR Units of Reporting)
LC	Lower than LOQ (Units of Quantification)

Analysis method* is/are not included in scope of Accreditation ISO/IEC 17025.
The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management: N. B. Bapat
Approved by: D. Kumar
Instructor: Prof. Chaturvedi

Approved by _____
 Name: _____
 Signature: _____
 Date: _____

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Analysis / Test Report

TESTING
No.0042
Lot ID: 22104574
Date Received : Oct 04, 2022
Date Reported : Oct 11, 2022
Report Number : 2447920-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number	22104574-1			
Sample Date	Oct 04, 2022 0:50 AM			
Sample Description	Wastewater			
Contract ID	L-ESIE-048_2550	Plot	S-36	Site
Date Analysis Commenced	Oct 04, 2022			
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)			
Physical Property	Yellow, a lot of odour, solid and some turbid			

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	34	≤300	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	123	≤750	APHA (2017), 5220 B	Rayong
Oil & Grease	mg/L	-	3	10	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	34.2	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	25	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Tonkiet Wongachai

Remark :
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- "C" : Lower than LOQ (Limit of Quantitation) / LOQ (Limit of Reporting)
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Analysis / Test Report

TESTING
No.0042
Lot ID: 2219977
Date Received : Nov 02, 2022
Date Reported : Nov 08, 2022
Report Number : 2474018-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Sample Number	2219977-1			
Sample Date	Nov 02, 2022 9:48 AM			
Sample Description	Wastewater			
Contract ID	L-ESIE-048_2550	Plot	S-36	Site
Date Analysis Commenced	Nov 02, 2022			
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)			
Physical Property	Yellow, a lot of odour, solid and some turbid			

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	33	≤300	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	105	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	13	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	38.5	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	22	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Tonkiet Wongachai

Remark :
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Life Sciences

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Shanghai, 4015 (11.08.04)



Analysis / Test Report

TESTING
No. 0042
Lot ID: 2285914

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory Monthly
Project Location: ESIE

Page 1 of 1

Sample Number	2285914-1
Sample Date	Jul 08, 2022 9:18 AM
Sample Description	Wastewater
Contract ID	L-ESIE-156-2550
Date Analysis Commenced	Jul 08, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	29	≤500	APHA (2017), S210 B	Rayong
COD	mg/L	1.5	5	96	≤750	APHA (2017), S220 D	Rayong
Fluoride	mg/L	0.05	0.2	0.8	≤5	APHA (2017), 4500-F(C)	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Based on APHA (2017), S230 B	Rayong
pH (on site) *	-	-	-	7.8	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	31.6	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	36	≤700	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Tanasit Wongasachai

Remark :
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Analysis / Test Report

TESTING
No. 0042
Lot ID: 2288118

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Random Check
Project Location: ESIE

Page 1 of 1

Sample Number	2288118-1
Sample Date	Aug 03, 2022 10:19 AM
Sample Description	Wastewater
Contract ID	L-ESIE-156-2550
Date Analysis Commenced	Aug 03, 2022
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Brown, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	48	≤500	APHA (2017), S210 B	Rayong
COD	mg/L	1.5	5	124	≤750	APHA (2017), S220 D	Rayong
Color (at Original pH)	ADHI	-	5	42	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADHI	-	5	42	≤600	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	0.005	Not Detected	≤0.2	Based on APHA (2017), 4500-CN(C), (V)	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), S230 B	Rayong
pH (on site) *	-	-	-	7.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	0.07	≤1	APHA (2017), S230 D	Rayong
Temperature *	Degree C	-	-	31.0	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	240	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	60	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Tanasit Wongasachai, Panupong Manit

Remark :
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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location: ESIE

Page 1 of 1

Sample Number : 2288118-1
Sampled Date : Aug 03, 2022 10:19 AM
Sample Description : Wastewater
Contract ID : L-ESIE-156-2550 Plot : M-27-28 Site : Sunlit (Thailand) Co., Ltd.
Date Analysis Commenced : Aug 04, 2022
Condition of Sample : Contained in two glass vials, one amber glass bottle and seven plastic bottles. Sample containers comply to pretreatment - preservation - preservation standards (APHA / USEPA)
Physical Property : Brown, a lot of colour, solid and turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Iron	mg/L	0.003	0.005	0.32	≤10.0	BS660 on APHA (2017), 3125	Bangkok
Water Testing							
Fluoride	mg/L	0.05	0.2	0.6	≤5	APHA (2017), 4500-F(C)	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant
Sampled By : Tanasit Wongsochai, Panuapong Maat

Remark :
- LOD : Limit of Detection
- <C> : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * : are not included in scope of Accreditation ISO/IEC 17025
- [A] : Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, 055 Accreditation No. 0009.
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Approved by
Dej Changchom
Senior Manager

D. Changchom

RECEIVED: 8/16/2022 Moo 5 : 1. Maenam Khru A. Pluakdaeng Rayong 21140 Thailand TEL: +66 0 3304 8555 FAX: +66 0 3304 8556
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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory Monthly
Project Location: ESIE

Page 1 of 1

Sample Number : 22105706-1
Sampled Date : Sep 02, 2022 10:15 AM
Sample Description : Wastewater
Contract ID : L-ESIE-156-3350 Plot : M-27-28 Site : Sunlit (Thailand) Co., Ltd.
Date Analysis Commenced : Sep 02, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of colour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	26	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	66	≤750	APHA (2017), 5210 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	31.2	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	34	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant
Sampled By : Tanasit Wongsochai

Remark :
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Technical Management
Mayumee Banchoangit
Supervisor

N. Banchoangit

Approved by
Dej Changchom
Senior Manager

D. Changchom

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Analysis / Test Report

TESTING
No.0042
Lot ID: 22119003

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Puakdaeng, Amphur Puakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number	22119003-1
Sample Date	Oct 07, 2022 2:40 PM
Sample Description	Wastewater
Contract ID	ESIE 136, 2550
Plot	M-27, 28
Site	Sunlit (Thailand) Co., Ltd.
Date Analysis Commenced	Oct 07, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							Rayong
BOD (5 days at 20 Degree C)	mg/L	-	2	35	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	158	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.6	5.5-9.0	Based on APHA (2017), 9005 H	Rayong
Temperature *	Degree C	-	-	31.5	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids, Dried at 103-105 degree C	mg/L	-	5	62	≤100	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Narurat Thammassaro

Remark :
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Technical Management

N. Bannapit

Narumon Banchongkiet
Supervisor

Approved by

D. Jinnat

Dig. Chanchon
Senior Manager

Wichitkarn P-223-P-942

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Analysis / Test Report

TESTING
No.0042
Lot ID: 22119003

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Puakdaeng, Amphur Puakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number	22119003-1
Sample Date	Oct 07, 2022 2:40 PM
Sample Description	Wastewater
Contract ID	ESIE 136, 2550
Plot	M-27, 28
Site	Sunlit (Thailand) Co., Ltd.
Date Analysis Commenced	Oct 08, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							Rayong
Fluoride	mg/L	0.05	0.2	0.7	≤5	APHA (2017), 4500-Cl	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Narurat Thammassaro

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Approved by

N. Bannapit

Narumon Banchongkiet
Supervisor

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Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

TESTING
No.0042
Lot ID: 21130370
Date Received : Nov 07, 2022
Date Reported : Nov 14, 2022
Report Number: 2475162-1

Page 1 of 1

Sample Number	22130370-1				
Sample Date	Nov 07, 2022 10:15 AM				
Sample Description	Wastewater				
Contract ID	L_ESIE_156_2550	Pilot	M-27/28	Site	Snitk (Thailand) Co., Ltd.
Date Analysis Commenced	Nov 07, 2022				
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)				
Physical Property	Yellow, some odour, solid and turbid				
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification
Water Testing					
BOD (5 days at 20 Degree C)	mg/L	-	2	18	APHA (2017), 5210 B
COD	mg/L	1.5	5	68	APHA (2017), 5220 D
Oil & Grease	mg/L	-	3	5	Based on APHA (2017), 5520 B
pH (on site) *	-	-	-	7.7	Based on APHA (2017), 8200 H (B)
Temperature *	Degree C	-	-	31.1	Based on APHA (2017), 8555 B
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	36	APHA (2017), 2540 D

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongachai

Remark :

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Technical Management

N. Banphit

Narumon Benchongkit
Supervisor

Approved by

D. Chongchuan

Dig Chongchuan
Senior Manager

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
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Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

TESTING
No.0042
Lot ID: 22130370
Date Received : Nov 07, 2022
Date Reported : Nov 14, 2022
Report Number: 2475162-2

Page 1 of 1

Sample Number	22130370-1				
Sample Date	Nov 07, 2022 10:15 AM				
Sample Description	Wastewater				
Contract ID	L_ESIE_156_2550	Pilot	M-27/28	Site	Snitk (Thailand) Co., Ltd.
Date Analysis Commenced	Nov 06, 2022				
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)				
Physical Property	Yellow, some odour, solid and turbid				
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification
Water Testing					
Fluoride	mg/L	0.05	0.2	0.7	APHA (2017), 4500 FIC

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongachai

Remark :

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Approved by

N. Banphit

Narumon Benchongkit
Supervisor

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408331-1994

1 Rayong, 408331-1994



Analysis / Test Report

TESTING
No.0042
Lot ID: 22140273

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory Monthly

Project Location: ESIE

Date Received : Dec 02, 2022

Date Reported : Dec 10, 2022

Report Number : 2505098-1

Page 1 of 1

22140273-1							
Sample Number	Dec 02, 2022 9:40 AM						
Sampled Date	Wastewater						
Sample Description							
Contract ID	L_ESIE_156_2550						
Plot	M-27.28						
Site	Suitt (Thailand) Co., Ltd.						
Date Analysis Commenced	Dec-02, 2022						
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some colour, solid and turbid						
Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing	mg/L	-	2	50	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	127	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	7	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 B	Rayong
pH (on site) *	-	-	-	7.7	5.5-8.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 H (B)	Rayong
Temperature *	Degree C	-	-	30.6	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	49	≤320	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560. Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Paramet, Sattayakul

Remark :
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Technical Management

N. Banymit

Narumon Banditongkiet

Supervisor

Approved by

D. Chuan

Dej Chuan

Senior Manager

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Wt: 021-011 7-323-49442

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Analysis / Test Report

TESTING
No.0042
Lot ID: 22140273

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory Monthly

Project Location: ESIE

Date Received : Dec 02, 2022

Date Reported : Dec 10, 2022

Report Number : 2505098-2

Page 1 of 1

Sample Number	22140273-1						
Sampled Date	Dec 02, 2022 9:40 AM						
Sample Description	Wastewater						
Contract ID	L-ESIE_156_2550						
Plot	M-27.28						
Site	Suwit (Thailand) Co.,Ltd.						
Date Analysis Commenced	Dec 02, 2022						
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some colour, solid and turbid						
Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing Fluoride	mg/L	0.05	0.2	0.6	≤5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 H (C)	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560. Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Paramet, Sattayakul

Remark :
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Approved by

N. Banymit

Narumon Banditongkiet

Supervisor

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Analysis / Test Report

TESTING
No.0042
Lot ID: 2288135

Date Received : Aug 09, 2022
Date Reported : Aug 16, 2022
Report Number : 2382365-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur, Phukdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number : 2288135-1

Sampled Date : Aug 09, 2022 2:21 PM

Sample Description : Wastewater

Contract ID : L_ESE_005_2550 Plot : EH-01 Site : OCI Automotive Products Co., Ltd.

Date Analysis Commenced : Aug 09, 2022

Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)

Physical Property : Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	20	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	31.9	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanat Wongdatchai

Remark :

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Technical Management

N. Bangphit

Approved by

D. Jinnai

Dej Chongchon

Supervisor

Senior Manager

Head Office

Wattana 333-9945

Wattana 333-9945

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SHANGHAI, CHINA



Analysis / Test Report

TESTING
No.0042
Lot ID: 2275245

Date Received : Jul 11, 2022
Date Reported : Jul 18, 2022
Report Number : 2349736-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur, Phukdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number : 2275245-1

Sampled Date : Jul 11, 2022 3:30 PM

Sample Description : Wastewater

Contract ID : L_ESE_005_2550 Plot : EH-01 Site : OCI Automotive Products Co., Ltd.

Date Analysis Commenced : Jul 11, 2022

Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)

Physical Property : Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	30	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	117	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	32.5	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	24	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Natthak Nammasaro

Remark :

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Technical Management

N. Bangphit

Approved by

D. Jinnai

Dej Chongchon

Supervisor

Senior Manager

Head Office

Wattana 333-9945

Wattana 333-9945

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Analysis / Test Report

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Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

TESTING
No.0042
Lot ID: 2283400
Date Received : Sep 12, 2022
Date Reported : Sep 16, 2022
Report Number : 2415115-1

Page 1 of 1

Sample Number : 2283400-1
Sampled Date : Sep 12, 2022 10:22 AM
Sample Description : Wastewater
Contract ID : L_ESIE_006_2550 Plot : EM-01 Site : CCI Automotive Products Co., Ltd.
Date Analysis Commenced : Sep 12, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odor, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	35	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	156	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	8	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.4	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.3	≤45	Based on APHA (2017), 2520 B	Rayong
Total Suspended Solids Dried at 105±0.5 Degree C	mg/L	-	5	34	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Paramet Sattayakun

Remarks :
* LOD : Limit of Detection
* LOR : Lower than LOQ (Limit of Quantification) / LOQ (Limit of Reporting)
* Analytical method * above not included in scope of Accreditation ISO/IEC 17025.
* The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Bannapit

Approved by

D. Chuan

Supervisor
Deji Chuanchoon
Senior Manager

in: 090917 7-323-4-9445
in: 090917 7-323-4-9442

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Life Sciences www.alsglobal.com

NIGHT SOLUTIONS PRETTY PARTNER

480-837-0000

S: 090917, ALG, 01, 01, 23794



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Puaikdaeng, Amphur Puaikdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

TESTING
No.0042
Lot ID: 22104544
Date Received : Oct 12, 2022
Date Reported : Oct 17, 2022
Report Number : 244746-1

Page 1 of 1

Sample Number : 22104544-1
Sampled Date : Oct 12, 2022 4:30 PM
Sample Description : Wastewater
Contract ID : L_ESIE_006_2550 Plot : EM-01 Site : CCI Automotive Products Co., Ltd.
Date Analysis Commenced : Oct 12, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odor, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	66	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	169	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.5	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.5	≤45	Based on APHA (2017), 2520 B	Rayong
Total Suspended Solids Dried at 105±0.5 Degree C	mg/L	-	5	30	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Pithaya Thongbang

Remarks :
* LOD : Limit of Detection
* LOR : Lower than LOQ (Limit of Quantification) / LOQ (Limit of Reporting)
* Analytical method * above not included in scope of Accreditation ISO/IEC 17025.
* The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Bannapit

Approved by

D. Chuan

Supervisor
Deji Chuanchoon
Senior Manager

in: 090917 7-323-4-9445
in: 090917 7-323-4-9442

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Life Sciences www.alsglobal.com

NIGHT SOLUTIONS PRETTY PARTNER

480-837-0000

S: 090917, ALG, 01, 01, 24474



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Random Check
Project Location: ESJE

Page 1 of 1

Sample Number 22129814-1
Sampled Date Nov 02, 2022 10:40 AM
Sample Description Wastewater
Contract ID L ESJE_006_2550 Plot BM-01 Site CCI Automotive Products Co., Ltd.
Date Analysis Commenced Nov 02, 2022
Condition of Sample Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment.
Physical Property Yellow, a bit of color, some solid and turbid

Analyte	Unit	LOD	LOQ (LOE)	Result	Guideline / Specification	Method	Testing Location
Water Testing							Rayong
BOD (5 days at 20 Degree C)	mg/L	-	2	19	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	15	5	57	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADNI	-	5	49	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADNI	-	5	47	≤600	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	0.005	Not Detected	≤0.2	Based on APHA (2017), 4500-CHCl3 (E)	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.5	5.5-9.0	Based on APHA (2017), 4500-H	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1	APHA (2017), 5530 D	Rayong
Temperature *	Degree C	-	-	30.3	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 Degree C	mg/L	-	5	436	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 102-105 Degree C	mg/L	-	5	13	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Pittaya Thongtong, Samart Kuanyalee

Remark :
* LOD : Limit of Detection
* "≤" : Lower than LOQ (Limit of Quantitation) / LOE (Limit of Reporting)
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Technical Management : N. Banchit
Approved by : D. Chongchuan
Signature :
Wastewater 5-223-9-945

Signature :
Wastewater 5-223-9-942

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Wastewater 5-223-9-942

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Wastewater 5-223-9-942

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Wastewater 5-223-9-942

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Wastewater 5-223-9-942

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Wastewater 5-223-9-942

Signature :
Wastewater 5-223-9-942

Signature :
Wastewater 5-223-9-942



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Random Check
Project Location: ESJE

Page 1 of 1

Sample Number 22129814-1
Sampled Date Nov 02, 2022 10:40 AM
Sample Description Wastewater
Contract ID L ESJE_006_2550 Plot BM-01 Site CCI Automotive Products Co., Ltd.
Date Analysis Commenced Nov 02, 2022
Condition of Sample Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment.
Physical Property Yellow, a bit of color, some solid and turbid

Analyte	Unit	LOD	LOQ (LOE)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							Bangkok
Arsenic	mg/L	0.0003	0.0005	0.003	≤0.25	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.0003	0.0005	0.44	≤1.0	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.0003	0.0005	0.03	≤2.0	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Based on APHA (2017), 3500-Cr (B)	Bangkok
Lead	mg/L	0.0003	0.0005	0.0006	≤0.2	Based on APHA (2017), 3125	Bangkok
Manganese	mg/L	0.0003	0.0005	0.26	≤5.0	Based on APHA (2017), 3125	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Based on APHA (2017), 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.002	≤1.0	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.0003	0.0005	0.0005	≤0.02	Based on APHA (2017), 3125	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	Based on APHA (2017), Calculated	Bangkok
Zinc	mg/L	0.003	0.005	0.07	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Pittaya Thongtong, Samart Kuanyalee

Remark :
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Technical Management : Sauttee N.
Approved by : Kankana Anuk
Signature :
Wastewater 5-204-9-9709

Signature :
Wastewater 5-204-9-9711

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Wastewater 5-204-9-9711

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Wastewater 5-204-9-9711

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Wastewater 5-204-9-9711

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Wastewater 5-204-9-9711

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Wastewater 5-204-9-9711

Signature :
Wastewater 5-204-9-9711



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Random Check
Project Location : ESIE

TESTING
No.0042
Lot ID: 22129814
Date Received : Nov 02, 2022
Date Reported : Nov 09, 2022
Report Number : 2473789-3

Page 1 of 1

Sample Number : 22129814-1
Sampled Date : Nov 02, 2022 10:40 AM
Sample Description : Wastewater
Contract ID : L_ESIE_005_2550 Plot : EM-01 Site : CCI Automotive Products Co., Ltd.
Date Analysis Commenced : Nov 03, 2022
Condition of Sample : Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Iron	mg/L	0.003	0.005	0.03	≤10.0	Based on APHA (2017), 3125	Bangkok
Water Testing							
Fluoride	mg/L	0.05	0.2	0.7	≤5	APHA (2007), 4500-F(C)	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Pithaya Thongdaeng, Sarnot Burapha

Remark :
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- (A) Analytical method : figure not included in scope of Accreditation ISO/IEC 17025
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Approved by

D. Chongchit
Senior Manager

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400-541646

S. Rajaratnam (135394)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory Monthly
Project Location : ESIE

TESTING
No.0042
Lot ID: 22139990
Date Received : Dec 05, 2022
Date Reported : Dec 12, 2022
Report Number : 2594235-1

Page 1 of 1

Sample Number : 22139990-1
Sampled Date : Dec 06, 2022 13:30 PM
Sample Description : Wastewater
Contract ID : L_ESIE_005_2550 Plot : EM-01 Site : CCI Automotive Products Co., Ltd.
Date Analysis Commenced : Dec 06, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	36	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	123	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	10	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - N (B)	Rayong
Temperature *	Degree C	-	-	30.6	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Suspended Solids Oiled at 103-105 Degree C	mg/L	-	5	27	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Tinnak Wongasachai

Remark :
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- Analytical method : figure not included in scope of Accreditation ISO/IEC 17025
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Technical Management

N. Banchit

Approved by

D. Chongchit

Natunon Banchit

Supervisor

Yanbanchit, 7-323-9-9445

D. Chongchit

Senior Manager

Wattana 7-323-9-9442

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S. Rajaratnam (135394)



Analysis / Test Report

TESTING
No.0042
Lot ID: 2275295

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
Date Received : Jul 04, 2022
Date Reported : Jul 11, 2022
Report Number : 2249853-1

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 1 of 1

Sample Number 2275295-1
Sample Date Jul 04, 2022 1:56 PM
Sample Description Wastewater
Contract ID L ESIE 016_2555 Plot PX-20 Site SunRiko Rubber Compounding (Thailand) Ltd.
Date Analysis Commenced Jul 04, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, some solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	25	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.2	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.8	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Wanlop Hunchanow

Remark :
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N. Bangkit

Technical Management

Niramon Bandongkitt
Supervisor
Tel: 09-00000000-323-9-9445

Approved by

D. Jumbon

Daj Changchon
Senior Manager
Tel: 09-00000000-323-9-9442

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81999999_AH_GA-enq (3.12019)



Analysis / Test Report

TESTING
No.0042
Lot ID: 2286185

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
Date Received : Aug 08, 2022
Date Reported : Aug 15, 2022
Report Number : 2382490-1

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 1 of 1

Sample Number 2286185-1
Sample Date Aug 08, 2022 10:38 AM
Sample Description Wastewater
Contract ID L ESIE 016_2555 Plot PX-20 Site SunRiko Rubber Compounding (Thailand) Ltd.
Date Analysis Commenced Aug 08, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Black, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	23	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	113	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	28.6	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	64	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Pathompong Komswat

Remark :
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* <2 : Lower than LOQ (Limit of Quantification) / LOR (Limit of Reporting)
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N. Bangkit

Technical Management

Niramon Bandongkitt
Supervisor
Tel: 09-00000000-323-9-9445

Approved by

D. Jumbon

Daj Changchon
Senior Manager
Tel: 09-00000000-323-9-9442

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81999999_AH_GA-enq (3.12019)



Analysis / Test Report

TESTING
No.0042
Lot ID: 22118714
Date Received : Oct 03, 2022
Date Reported : Oct 10, 2022
Report Number : 2447873-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Raindown Check

Project Location: ESIE

Page 1 of 1

Sample Number 22118714-1
Sampled Date Oct 03, 2022 11:00 AM
Sample Description Wastewater
Contract ID L-ESIE 016.2555 **Plot** PX-20 **Site** Sumritko Rubber Compounding (Thailand) Ltd.
Date Analysis Commenced Oct 03, 2022
Condition of Sample Contained in two glass vials, one amber glass bottle and six plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Gray, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	154	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	438	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMT	-	5	104	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMT	-	5	100	≤600	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	0.005	Not Detected	≤0.2	Based on APHA (2017), 4500-CN(C), (E)	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	3	21	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.2	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	0.03	≤1	APHA (2017), 5530 D	Rayong
Temperature *	Degree C	-	-	28.4	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	404	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	825	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongasachai, Thansoon Naimakunna

Remark :
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Technical Management

Approved by

N. Banphit

Narumon Banphongit
Supervisor

D. Chongchon

Dej Chongchon
Senior Manager

Wattanaeun 7-323-a-9445

Wattanaeun 7-323-a-9442

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400-941 2446

Silpakornu, A. G. 98 (11/5/60)



Analysis / Test Report

TESTING
No.0042
Lot ID: 22104336
Date Received : Sep 05, 2022
Date Reported : Sep 12, 2022
Report Number : 2415419-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location: ESIE

Page 1 of 1

Sample Number 22104336-1
Sampled Date Sep 05, 2022 2:20 PM
Sample Description Wastewater
Contract ID L-ESIE 016.2555 **Plot** PX-20 **Site** Sumritko Rubber Compounding (Thailand) Ltd.
Date Analysis Commenced Sep 05, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Black, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	39	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	128	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.0	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	67	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Worikop Hunchinnow

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- The Laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Approved by

N. Banphit

Narumon Banphongit
Supervisor

D. Chongchon

Dej Chongchon
Senior Manager

Wattanaeun 7-323-a-9445

Wattanaeun 7-323-a-9442

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Silpakornu, A. G. 98 (11/5/60)



Analysis / Test Report

TESTING

No.0009
Lot ID: 22118714
Date Received : Oct 03, 2022
Date Reported : Oct 10, 2022
Report Number : 2447877-2

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location: ESIE

Page 1 of 1

Sample Number	22118714-1			
Sampled Date	Oct 03, 2022 11:00 AM			
Sample Description	Wastewater			
Contract ID	LESIE_016_2555	Plot	PX-20	Site Sumitako Rubber Compounding (Thailand) Ltd.
Date Analysis Commenced	Oct 04, 2022			
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)			
Physical Property	Gray, a lot of odour, solid and turbid			

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.007	≤0.25	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.0003	0.0005	0.19	≤1.0	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.0003	0.0005	0.05	≤2.0	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Based on APHA (2017), 3500-Cr (B)	Bangkok
Lead	mg/L	0.0003	0.0005	0.03	≤0.2	Based on APHA (2017), 3125	Bangkok
Manganese	mg/L	0.0003	0.0005	0.42	≤5.0	Based on APHA (2017), 3125	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Based on APHA (2017), 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.01	≤1.0	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	≤0.02	Based on APHA (2017), 3125	Bangkok
Trivalent Chromium *	mg/L	-	0.01	0.02	≤0.75	Based on APHA (2017), Calculated	Bangkok
Zinc	mg/L	0.003	0.005	3.15	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongasachai , Thanassun Namakunna

Remark :
- LOD : Limit of Detection
- "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management
Savitree N.
Manager
โทรศัพท์ ๖-๒๐4-๔-4709

Approved by

Kanokhom Anek
Senior Manager
โทรศัพท์ ๖-๒๐4-๔-6111

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Life Sciences

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Analysis / Test Report

TESTING

No.0042
Lot ID: 22118714
Date Received : Oct 03, 2022
Date Reported : Oct 10, 2022
Report Number : 2447877-3

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location: ESIE

Page 1 of 1

Sample Number	22118714-1			
Sampled Date	Oct 03, 2022 11:00 AM			
Sample Description	Wastewater			
Contract ID	LESIE_016_2555	Plot	PX-20	Site Sumitako Rubber Compounding (Thailand) Ltd.
Date Analysis Commenced	Oct 04, 2022			
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)			
Physical Property	Gray, a lot of odour, solid and turbid			

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Iron	mg/L	0.003	0.005	1.65	≤10.0	Based on APHA (2017), 3125	Bangkok
Fluoride	mg/L	0.05	0.2	0.2	≤5	APHA (2017), 4500-F(C)	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongasachai , Thanassun Namakunna

Remark :
- LOD : Limit of Detection
- "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- [N] Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, ISO Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by

Dej Chongchon
Senior Manager

ADDRESS: 616/10 Moo 3, T. Maenam Khu A, Pluakdaeng Rayong 21140 Thailand. โทรศัพท์ +66 0 3304 8555 FAX +66 0 3304 8556

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Analysis / Test Report

TESTING
No.0042
Lot ID: 2275309
Date Received : Jul 09, 2022
Date Reported : Jul 15, 2022
Report Number : 23-99886-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Puaekdaeng, Amphur Puaekdaeng, Rayong
Thailand 21140

Project Name : Factory I Monthly
Project Location: ESIE

1 of 1 page

Sample Number	Contract ID	Date Analysis Commenced	Condition of Sample	Physical Property
2275009-1	JUL 08, 2022	2:15 PM	Water/water	L_ESIC_010_2557 Plot: 1-12
Sample Description	Water/water			SITE TONY INDUSTRIES (THAILAND) CO., LTD.
Sample Date				
Sample Location				
Analysis Method				
Analysis Result				
Analysis Unit				
Analysis Guidelines / Specification				
Analysis Method				
Analysis Location				
Water Testing				
BOD (5 days at 20 Degree C)	mg/L	-	2	<2
COD	mg/L	1.5	5	26
Oil & Grease	mg/L	-	3	<3
pH (on site) *	(on site)	-	-	6.6
Temperature *	Degree C	-	-	31.3
Total Suspended Solids Dried at	mg/L	-	5	<50

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Tanasak Wongsachai

Remark :

- 100 : Unit of Detection
- "c" : Lower than 100 (Unit of Reporting)
- Analyte(s) marked * refer not included in scope of Accreditation ISO/IEC 17025.

The information has been recorded as an annex to the laboratory compliance with the ISO/IEC 17025.

N. Banfill

Answer:

Najumon Bangladesh
Supervisor

Dej Changchon
Senior Manager
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3-1 Response All Groups (4/29/99)



Analysis / Test Report

TESTING
No.0042
Lot ID: 22118723
Date Received : Oct 03, 2022
Date Reported : Oct 10, 2022
Report Number : 247904-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Puaikdaeng, Amphur Puaikdaeng, Rayong
Thailand 21140

P/O :

Project Name : Random Check

Project Location : ESIE

Page 1 of 1

Sample Number	22118723-1						
Sampled Date	Oct 03, 2022 10:10 AM						
Sample Description	Wastewater						
Contract ID	L-ESIE-010-2557		Plot	L-12		Site	TOYU INDUSTRIES (THAILAND) CO., LTD.
Date Analysis Commenced	Oct 03, 2022						
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)						
Physical Property	Yellow, a lot of colour, some solid and turbid						
Analyte	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	2	≤500	APHA (2017), 5210 B	Rayong
COO	mg/L	1.5	5	24	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	31	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	28	≤600	APHA (2017), 2130 F	Rayong
Cyanide as HCN	mg/L	0.001	0.005	Not Detected	≤0.2	Based on APHA (2017), 4500-OMC, (E)	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	<0.010	≤1	APHA (2017), 5530 D	Rayong
Temperature *	Degree C	-	-	28.2	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	116	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 105-305 degree C	mg/L	-	5	6	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasak Wongsachai, Thanaosin Namsakunna

Remarks:
* LOD : Limit of Detection.
* "C" : Lower than LOD (Limit of Quantification) / LOD (Limit of Reporting)
* Analytical method : Refer not included in scope of Accreditation ISO/IEC 17025.
* The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management
N. Bangmit

Approved by

D. Changdon

Supervisor

Senior Manager

Wattanaud 3-323-9442

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Analysis / Test Report

TESTING
No.0009
Lot ID: 22118723
Date Received : Oct 03, 2022
Date Reported : Oct 10, 2022
Report Number : 247904-2

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Puaikdaeng, Amphur Puaikdaeng, Rayong
Thailand 21140

P/O :

Project Name : Random Check

Project Location : ESIE

Page 1 of 1

Sample Number	22118723-1						
Sampled Date	Oct 03, 2022 10:10 AM						
Sample Description	Wastewater						
Contract ID	L-ESIE-010-2557		Plot	L-12		Site	TOYU INDUSTRIES (THAILAND) CO.,LTD.
Date Analysis Commenced	Oct 04, 2022						
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)						
Physical Property	Yellow, a lot of odor, some solid and turbid						
Analyte	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.0009	\$0.25	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.0003	0.0005	0.03	\$1.0	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	\$0.03	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.0003	0.0005	0.003	\$2.0	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	\$0.25	Based on APHA (2017), 3500-Cr (6)	Bangkok
Lead	mg/L	0.0003	0.0005	<0.0005	\$0.2	Based on APHA (2017), 3125	Bangkok
Manganese	mg/L	0.0003	0.0005	0.03	\$5.0	Based on APHA (2017), 3125	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	\$0.005	Based on APHA (2017), 312	Bangkok
Nickel	mg/L	0.0003	0.0005	0.001	\$1.0	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	\$0.02	Based on APHA (2017), 3125	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	\$0.75	Based on APHA (2017), Calculated	Bangkok
Zinc	mg/L	0.003	0.005	0.03	\$5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasak Wongsachai, Thanaosin Namsakunna

Remarks:
* LOD : Limit of Detection.
* "C" : Lower than LOD (Limit of Quantification) / LOD (Limit of Reporting)
* Analytical method : Refer not included in scope of Accreditation ISO/IEC 17025.
* The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management
Savitree N.

Approved by

K. Anuk

Senior Manager

Wattanaud 3-2014-6111

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331, Road, Tambon Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESTE

TESTING
No.0042
Lot ID: 2275619

Date Received : Jul 07, 2022
Date Reported : Jul 14, 2022
Report Number : 2351409-1

Page 1 of 3

Sample Number : 2275619-1
Sample Date : Jul 07, 2022 15:15 AM
Sample Description : Wastewater
Contract ID : L-ESTE_003_2550
Date Analysis Commenced : Jul 07, 2022
Condition of Sample : Combined in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odor, acid and some turbid

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	2	19	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	118	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADCU	5	55	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADCU	5	51	≤600	APHA (2017), 2120 F	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	Wastewater Analysis	Rayong
Oil & Grease	mg/L	3	4	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	7.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	33.0	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 Degree C	mg/L	5	36	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pithaya Thongdaeng

Remark :

- LOD : Limit of Detection
- <C : Lower than LOQ (Limit of Quantification) / LOR (Limit of Reporting)
- Analysis marked * : Issue not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Baingit

Nattaporn Banchoangkit
Supervisor

Wattana Wattana
Supervisor

Approved by

D. Chundon

Daj Chundon
Senior Manager

Wattana Wattana
Senior Manager

The above results are valid only for the sample(s) submitted to the laboratory for the purpose of the test. The results are not valid for any other purpose. The laboratory is not responsible for the results of the test if the sample is not properly prepared or if the sample is not properly stored.

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NIGHT SOLUTIONS

616/10 Moo 5

51/Phuket, A. Road (13/10/14)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location : ESTE

TESTING
No.0042
Lot ID: 22118723

Date Received : Oct 03, 2022
Date Reported : Oct 10, 2022
Report Number : 2479104-3

Page 1 of 3

Sample Number : 22118723-1
Sample Date : Oct 03, 2022 16:10 AM
Sample Description : Wastewater
Contract ID : L-ESTE_010_2557
Date Analysis Commenced : Oct 04, 2022
Condition of Sample : Combined in two glass vials, one amber glass bottle and six plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odor, some acid and turbid

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						
pH Iron	mg/L	0.003	0.005	≤10.0	Based on APHA (2017), 3125	Bangkok
Water Testing Fluoride	mg/L	0.05	0.2	≤0.2	APHA (2017), 4500-F(C)	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasak Wongkarn

Remark :

- LOD : Limit of Detection
- <C : Lower than LOQ (Limit of Quantification) / LOR (Limit of Reporting)
- Analysis marked * : Issue not included in scope of Accreditation ISO/IEC 17025.
- (A) Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, BSE Accreditation No. 0189.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by

D. Chundon

Daj Chundon
Senior Manager

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NIGHT SOLUTIONS

616/10 Moo 5

51/Phuket, A. Road (13/10/14)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Sample Number	2288485-1
Sampled Date	Aug 05, 2022 10:47 AM
Sample Description	Wastewater
Contract ID	L_ESEI_023_2550
Date Analysis Commenced	Aug 05, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Colorless, odourless, no solid and turbid

Analyte	Unit	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	19	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	9	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	9	≤600	APHA (2017), 2120 F	Rayong
Formaldehyde	mg/L	0.03	Not Detected	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	8.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	30.4	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	<5	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pichaya Thongdaeng

Remark :
• LOD : Limit of Detection
• * : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
• Analyte(s) marked * above not included in scope of Accreditation ISO/IEC 17025.
• This laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Sample Number	22105772-1
Sampled Date	Sep 05, 2022 11:15 AM
Sample Description	Wastewater
Contract ID	L_ESEI_023_2550
Date Analysis Commenced	Sep 05, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	20	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	16	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	15	≤600	APHA (2017), 2120 F	Rayong
Formaldehyde	mg/L	0.03	Not Detected	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	7.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	30.3	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	<5	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Parinrat Satevayana

Remark :
• LOD : Limit of Detection
• * : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
• Analyte(s) marked * above not included in scope of Accreditation ISO/IEC 17025.
• This laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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Analysis / Test Report

ent : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Puaikdaeng, Amphur Puaikdaeng, Rayong
Thailand 21140

Project Name : Factory 1 Monthly
Project Location: ESIE

Page 1 of 1

Sample Number	22130438-1				
Sampled Date	Nov 04, 2022	11:00 AM			
Sample Description	Wastewater				
Contract ID	L_ESIE_023_2150	Plot	1-378	Site	BEHN Meyer Chemical (T) Co., Ltd.
Test Date	Nov 04, 2022				
Test Method	Analysis	Commenced			
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA).				
Physical Property	Yellow, some odor, solid and no turbid				

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
CD (5 days @ 20 Degree C)	mg/L	-	2	<2	≤500	APHA (2017), 5210 B	Rayong
DOC	mg/L	1.5	5	19	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMT	-	5	12	≤400	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMT	-	5	12	≤600	APHA (2017), 2120 F	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
PH (on site) *	-	-	-	7.1	5.5-9.0	Based on APHA (2017), 4500-41 (B)	Rayong
Temperature +	Degree C	-	-	31.2	≤45	Based on APHA (2017), 2550 B	Rayong
Unfiltered Suspended Solids dried at 103-105 °C	mg/L	-	5	56	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 ; Criteria of wastewater characteristic from factory discharge to central

Sampled By: Tanak Wongsachai

Remark :
 LOD : Unit of Detection
 "c" : Lower than LOQ (Limit of Quantization) / LOR (Limit of Reporting)
 "x" : Value(s) marked "x" have not included in scope of Accreditation ISO/IEC 17025.
 The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

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Narumon Banchoong
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Franklin

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Representative G. J. Nye (10:34:54)



Analysis / Test Report

TESTING
No.0042

Lot ID: 2275523

Date Received : Jul 08, 2022

Date Reported : Jul 14, 2022

Report Number : 2351287-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.

112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location: ESIE

Page 1 of 1

Sample Number	2275523-1					
Sample Date	Jul 08, 2022 2:05 PM					
Sample Description	Wastewater					
Contract ID	L_ESIE_013_2550	Plot	E-14	Site	Auto Alliance (Thailand) Co., Ltd.	
Location	Chemical					
Date Analysis Commenced	Jul 08, 2022					
Condition of Sample	Contained in one amber glass bottle and five plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)					
Physical Property	Yellow, a lot of odour, solid and some turbid					
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	-	2	16	≤500	APHA (2017), 5210 B
COD	mg/L	1.5	5	36	≤750	APHA (2017), 5220 D
Cyanide as HCN	mg/L	0.001	0.005	<0.005	≤0.2	Based on APHA (2017), 4500-CN(C), (E)
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B
pH (on site) *	-	-	-	7.2	5.5-9.0	Based on APHA (2017), 4500-H (B)
Temperature *	Degree C	-	-	30.6	≤45	Based on APHA (2017), 2550 B
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	11	≤200	APHA (2017), 2540 D

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Chansorn Lertmanthakunchai , Thanasoun Namakumia

Remark :
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Technical Management

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Approved by

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Senior Manager
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Analysis / Test Report

TESTING
No.0009

Lot ID: 2275523

Date Received : Jul 08, 2022

Date Reported : Jul 15, 2022

Report Number : 2351287-2

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.

112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location: ESIE

Page 1 of 1

Sample Number	2275523-1					
Sample Date	Jul 08, 2022 2:05 PM					
Sample Description	Wastewater					
Contract ID	L_ESIE_013_2550		Plot	E-14	Site	Auto Alliance (Thailand) Co.,Ltd.
Location	Chemical					
Date Analysis Commenced	Jul 11, 2022					
Condition of Sample	Contained in one amber glass bottle and five plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)					
Physical Property	Yellow, a lot of odour, solid and some turbid					
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method
Metals Testing						
Nickel	mg/L	0.0003	0.0005	0.10	≤1.0	Based on APHA (2017), 3125 Bangkok
Zinc	mg/L	0.003	0.005	0.52	≤5.0	Based on APHA (2017), 3125 Bangkok
Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant						
Sampled By : Chanuonorn Lermanthakunhal , Thaisoun Namakumma						

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Chansorn Lertmanthakunchai , Thanasoun Namakumia

Remark :
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Technical Management

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Approved by

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Senior Manager
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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

TESTING
No.0042
Lot ID: 2275586
Date Received : Jul 08, 2022
Date Reported : Jul 14, 2022
Report Number : 2351364-1

Page 1 of 1

Sample Number 2275586-1
Sampled Date Jul 08, 2022 1:50 PM
Sample Description Wastewater
Contract ID L ESIE 012_2550
Plot E-14
Site Auto Alliance (Thailand) Co., Ltd.
Location Office
Date Analysis Commenced Jul 08, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	6	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	42	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.2	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	32.0	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Filtered at 103-105 degree C	mg/L	-	5	9	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Chaiusorn Lertmanthakunchai , Thanasoun Namakunna

Remark :
- LOD : Limit of Detection
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Technical Management

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Narumon Bandongkit
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Approved by

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Senior Manager
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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

TESTING
No.0009
Lot ID: 2275586
Date Received : Jul 08, 2022
Date Reported : Jul 15, 2022
Report Number : 2351364-2

Page 1 of 1

Sample Number 2275586-1
Sampled Date Jul 08, 2022 1:50 PM
Sample Description Wastewater
Contract ID L ESIE 012_2550
Plot E-14
Site Auto Alliance (Thailand) Co., Ltd.
Location Office
Date Analysis Commenced Jul 11, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.04	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Chaiusorn Lertmanthakunchai , Thanasoun Namakunna

Remark :
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Technical Management

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Savitree Nongkham
Manager
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Approved by

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Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Puakdaeng, Amphur Puakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory 1 Monthly

Project Location: ESIE

TESTING
No.0042

Lot ID: 2288511

Date Received : Aug 10, 2022

Date Reported : Aug 17, 2022

Report Number : 2382652-1

Page 1 of 1

Sample Number	2288511-1
Sampled Date	Aug 10, 2022 10:45 AM
Sample Description	Wastewater
Contract ID	L ESIE 012_2550
Plot	E-14
Site	Auto Alliance (Thailand) Co., Ltd.
Location	Office
Date Analysis Commenced	Aug 10, 2022
Condition of Sample	Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	9	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	37	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.0	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	31.1	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	10	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pathompong Kornisawat, Jakkarn Manwicha

Remark:

- LOD : Limit of Detection
- LOR : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- * : Analytical method is not included in scope of Accreditation ISO/IEC 17025.
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Technical Management

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Puakdaeng, Amphur Puakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory 1 Monthly

Project Location: ESIE

TESTING
No.0009

Lot ID: 2288511

Date Received : Aug 10, 2022

Date Reported : Aug 18, 2022

Report Number : 2382652-2

Page 1 of 1

Sample Number	2288511-1
Sampled Date	Aug 10, 2022 10:45 AM
Sample Description	Wastewater
Contract ID	L ESIE 012_2550
Plot	E-14
Site	Auto Alliance (Thailand) Co., Ltd.
Location	Office
Date Analysis Commenced	Aug 11, 2022
Condition of Sample	Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.06	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pathompong Kornisawat, Jakkarn Manwicha

Remark:

- LOD : Limit of Detection
- LOR : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- * : Analytical method is not included in scope of Accreditation ISO/IEC 17025.
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Technical Management

Savitree N.
Savitree Nodsanglam
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Approved by

K. Anet
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Senior Manager
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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

TESTING
No.0042
Lot ID: 2288433
Date Received : Aug 10, 2022
Date Reported : Aug 17, 2022
Report Number : 2382577-1

P/O :
Project Name : Factory Monthly
Project Location: ESIE

Page 1 of 1

Sample Number 2288433-1
Sampled Date Aug 10, 2022 11:05 AM
Sample Description Wastewater
Contract ID L ESIE 013_2550 Plot E-14 Site Auto Alliance (Thailand) Co., Ltd.
Location Chemical
Date Analysis Commenced Aug 10, 2022
Condition of Sample Contained in one amber glass bottle and five plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	29	≤750	APHA (2017), 5220 D	Rayong
Cyanide as HCN	mg/L	0.001	0.005	<0.005	≤0.2	Based on APHA (2017), 4500-CN(C, E)	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.6	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 Degree C	mg/L	-	5	9	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pathompong Kornasawat, Jakkarin Manwicha

Remark :
* LOD : Limit of Detection
* LOR : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
* Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
* The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banjit
Nirumon Benchongkit
Supervisor
wttdnuarui 7-323-a-9445

Approved by

D. Chongdon
Dej Chongdon
Senior Manager
wttdnuarui 7-323-a-9442

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SLReports_ALS_rpt (1024x645)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

TESTING
No.0009
Lot ID: 2288433
Date Received : Aug 10, 2022
Date Reported : Aug 18, 2022
Report Number : 2382577-2

P/O :
Project Name : Factory Monthly
Project Location: ESIE

Page 1 of 1

Sample Number 2288433-1
Sampled Date Aug 10, 2022 11:05 AM
Sample Description Wastewater
Contract ID L ESIE 013_2550 Plot E-14 Site Auto Alliance (Thailand) Co., Ltd.
Location Chemical
Date Analysis Commenced Aug 11, 2022
Condition of Sample Contained in one amber glass bottle and five plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.09	≤1.0	Based on APHA (2017), 3125	Bangkok
Zinc	mg/L	0.003	0.005	0.30	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pathompong Kornasawat, Jakkarin Manwicha

Remark :
* LOD : Limit of Detection
* LOR : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
* Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
* The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Savitree N.
Savitree Nosangnam
Manager
wttdnuarui 7-204-a-4709

Approved by

Lark Anh.
Karokorn Anek
Senior Manager
wttdnuarui 7-204-a-6111

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location : ESIE

TESTING
No.0042

Lot ID: 22105702
Date Received : Sep 06, 2022
Date Reported : Sep 12, 2022
Report Number : 2416313-1

Page 1 of 1

Sample Number	22105702-1
Sample Date	Sep 06, 2022 9:46 AM
Sample Description	Wastewater
Contract ID	L_ESIE_013_2550
Plot	E-14
Site	Auto Alliance (Thailand) Co., Ltd.
Location	Chemical
Date Analysis Commenced	Sep 06, 2022
Condition of Sample	Contained in one amber glass bottle and five plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	*	2	5	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	26	≤750	APHA (2017), 5220 D	Rayong
Cyanide as KCN	mg/L	0.001	0.005	<0.005	≤0.2	Based on APHA (2017), 4500-CN(CI, E)	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.0	5.5-9.0	Based on APHA (2017), 4500-H (E)	Rayong
Temperature *	Degree C	-	-	29.3	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Paramet Sattayakun , Thanassoun Namakunna

Remark :

- * LOD : Limit of Detection
- * "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- * The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banthit

Natunon Banchongkit,
Supervisor

โทรศัพท์ 0-204-3-9445

Approved by

D. Chongchon

Dej Chongchon,
Senior Manager

โทรศัพท์ 0-204-3-9442

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location : ESIE

TESTING
No.0009

Lot ID: 22105702
Date Received : Sep 06, 2022
Date Reported : Sep 13, 2022
Report Number : 2416313-2

Page 1 of 1

Sample Number	22105702-1
Sample Date	Sep 06, 2022 9:46 AM
Sample Description	Wastewater
Contract ID	L_ESIE_013_2550
Plot	E-14
Site	Auto Alliance (Thailand) Co., Ltd.
Location	Chemical
Date Analysis Commenced	Sep 07, 2022
Condition of Sample	Contained in one amber glass bottle and five plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.06	≤1.0	Based on APHA (2017), 3125	Bangkok
Zinc	mg/L	0.003	0.005	0.21	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Paramet Sattayakun , Thanassoun Namakunna

- Remark :**
- * LOD : Limit of Detection
 - * "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
 - * Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
 - * The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

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Savitree Naisianglam,
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Approved by

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Senior Manager

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location: ESIE

TESTING
No.0042
Lot ID: 22105736
Date Received : Sep 06, 2022
Date Reported : Sep 13, 2022
Report Number: 2416344-1

Page 1 of 1

Sample Number 22105736-1
Sample Date Sep 06, 2022 9:30 AM
Sample Description Wastewater
Contract ID L ESIE_012_2550 Plot E-14 Site Auto Alliance (Thailand) Co., Ltd.
Location Office
Date Analysis Commenced Sep 06, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	3	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	23	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.0	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.5	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Paramet Sattayakun , Thanasoun Namakunna

Remark :
- LOD : Limit of Detection
- <LOD : Lower than LOQ (Limit of Quantitation) / LOB (Limit of Reporting)
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Technical Management

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Narumon Banchongkit
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Approved by

D. Chingchon
Dej Chingchon
Senior Manager
โทรศัพท์ ๖-323-๙-9442

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51 Report_Alt_01.pdf (11/10/01)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location: ESIE

TESTING
No.0009
Lot ID: 22105736
Date Received : Sep 06, 2022
Date Reported : Sep 13, 2022
Report Number: 2416344-2

Page 1 of 1

Sample Number 22105736-1
Sample Date Sep 06, 2022 9:30 AM
Sample Description Wastewater
Contract ID L ESIE_012_2550 Plot E-14 Site Auto Alliance (Thailand) Co., Ltd.
Location Office
Date Analysis Commenced Sep 07, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.08	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Paramet Sattayakun , Thanasoun Namakunna

Remark :
- LOD : Limit of Detection
- <LOD : Lower than LOQ (Limit of Quantitation) / LOB (Limit of Reporting)
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Technical Management

Savitree N.
Savitree Nonsangiam
Manager
โทรศัพท์ ๖-204-๙-4709

Approved by

K. Anuk
Kanokkorn Anuk
Senior Manager
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480/51 (ENL)

51 Report_Alt_01.pdf (7/10/01)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

TESTING
No.0042
Lot ID: 22119032
Date Received : Oct 12, 2022
Date Reported : Oct 17, 2022
Report Number : 2448172-1

Page 1 of 1

Sample Number	22119032-1
Sampled Date	Oct 12, 2022 9:42 AM
Sample Description	Wastewater
Contract ID	L ESIE_012_2550
Plot	E-14
Site	Auto Alliance (Thailand) Co., Ltd.
Location	Office
Date Analysis Commenced	Oct 12, 2022
Condition of Sample	Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	4	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	28	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.1	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	8	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasak Wongsachai , Thanasoun Namakunna

Remark :
- LOD : Limit of Detection
- LOR : Limit of Reporting
- LOR : Limit of Reporting
- Analyzed * : Items not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

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Approved by

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480-111 (THAI)

S. (Sriwong) A. (A. get) S. (Sriwong)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

TESTING
No.0009
Lot ID: 22119032
Date Received : Oct 12, 2022
Date Reported : Oct 17, 2022
Report Number : 2448172-2

Page 1 of 1

Sample Number	22119032-1
Sampled Date	Oct 12, 2022 9:42 AM
Sample Description	Wastewater
Contract ID	L ESIE_012_2550
Plot	E-14
Site	Auto Alliance (Thailand) Co., Ltd.
Location	Office
Date Analysis Commenced	Oct 14, 2022
Condition of Sample	Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.03	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasak Wongsachai , Thanasoun Namakunna

Remark :
- LOD : Limit of Detection
- LOR : Limit of Reporting
- LOR : Limit of Reporting
- Analyzed * : Items not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

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Sawitree Naisangiam
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โทรศัพท์ ๖-204-๙-4709

Approved by

K. Anek
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480-111 (THAI)

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location: ESIE

TESTING
No.0042

Lot ID: 22118998
Date Received : Oct 12, 2022
Date Reported : Oct 17, 2022
Report Number : 2448087-1

Page 1 of 1

Sample Number	22118998-1						
Sampled Date	Oct 12, 2022 9:55 AM						
Sample Description	Wastewater						
Contract ID	L ESIE 013_2550	Plot	E-14	Site	Auto Alliance (Thailand) Co., Ltd.		
Location	Chemical						
Date Analysis Commenced	Oct 12, 2022						
Condition of Sample	Contained in one amber glass bottle and five plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	26	≤750	APHA (2017), 5220 D	Rayong
Cyanide as HCN	mg/L	0.001	0.005	<0.005	≤0.2	Based on APHA (2017), 4500-CN(C), (E)	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.0	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.4	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degrees C	mg/L	-	5	<5	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongasachai , Thanasun Namakunna

Remark :

- LOD : Limit of Detection
- *C : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
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Technical Management

N. Banphit
Narumon Bandongjit
Supervisor
ติดต่อเราที่ : 323-9-9445

Approved by

D. Chingchon
Dej Chingchon
Senior Manager
ติดต่อเราที่ : 323-9-9442

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480-31 (THAI)

ALS (Thailand) Co., Ltd. (1-2559)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location: ESIE

TESTING
No.0009

Lot ID: 22118998
Date Received : Oct 12, 2022
Date Reported : Oct 17, 2022
Report Number : 2448087-2

Page 1 of 1

Sample Number	22118998-1						
Sampled Date	Oct 12, 2022 9:55 AM						
Sample Description	Wastewater						
Contract ID	L ESIE 013_2550		Plot	E-14		Site	Auto Alliance (Thailand) Co., Ltd.
Location	Chemical						
Date Analysis Commenced	Oct 14, 2022						
Condition of Sample	Contained in one amber glass bottle and five plastic bottles. Sample containers comply to pretreatment - preservation standards: (APHA / USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.06	≤1.0	Based on APHA (2017), 3125	Bangkok
Zinc	mg/L	0.003	0.005	0.27	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongasachai , Thanasun Namakunna

Remark :

- LOD : Limit of Detection
- *C : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Savitree N.
Savitree Naisanglam
Manager
ติดต่อเราที่ : 204-4-4709

Approved by

K. Anek
Korakorn Anek
Senior Manager
ติดต่อเราที่ : 204-4-6111

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ALS (Thailand) Co., Ltd. (1-2559)



Analysis / Test Report

TESTING

No.0042

Lot ID: 22129821

Date Received : Nov 02, 2022

Date Reported : Nov 09, 2022

Report Number : 2473948-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Random Check

Project Location: ESIE

Page 1 of 1

Sample Number	22129821-1						
Sampled Date	Nov 02, 2022 3:21 PM						
Sample Description	Wastewater						
Contract ID	L_ESIE_013_2550	Plot	E-14	Site	Auto Alliance (Thailand) Co.,Ltd.		
Location	Chemical						
Date Analysis Commenced	Nov 02, 2022						
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	10	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	33	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMT	-	5	9	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMT	-	5	8	≤600	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	0.005	<0.005	≤0.2	Based on APHA (2017), 4500-CN(C), (E)	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1	APHA (2017), 5530 D	Rayong
Temperature *	Degree C	-	-	31.4	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	156	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	28	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pittaya Thongtaeng , Samart Khumplee

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

N. Banphit

Technical Management

Narumon Banchongkhit
Supervisor
นันทมน บังชงกhit
วส.045557 3-323-9-9445

Approved by

Dej Changchon
Senior Manager
เดจ ช้างชน
วส.045557 3-323-9-9442

D. Jhuan

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480-SH (THAI)

S. Srisopha, AL. Co. (P) (24THU)



Analysis / Test Report

TESTING

No.0009

Lot ID: 22129821

Date Received : Nov 02, 2022

Date Reported : Nov 09, 2022

Report Number : 2473948-2

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Random Check

Project Location: ESIE

Page 1 of 1

Sample Number	22129821-1						
Sampled Date	Nov 02, 2022 3:21 PM						
Sample Description	Wastewater						
Contract ID	L_ESIE_013_2550	Plot	E-14	Site	Auto Alliance (Thailand) Co., Ltd.		
Location	Chemical						
Date Analysis Commenced	Nov 03, 2022						
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.001	≤0.25	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.0003	0.0005	0.14	≤1.0	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.0003	0.0005	0.01	≤2.0	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.0003	0.01	Not Detected	≤0.25	Based on APHA (2017), 3500-Cr (B)	Bangkok
Lead	mg/L	0.0003	0.0005	0.007	≤0.2	Based on APHA (2017), 3125	Bangkok
Manganese	mg/L	0.0003	0.0005	0.30	≤5.0	Based on APHA (2017), 3125	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Based on APHA (2017), 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.15	≤1.0	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	≤0.02	Based on APHA (2017), 3125	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	Based on APHA (2017), Calculated	Bangkok
Zinc	mg/L	0.0003	0.0005	0.54	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pittaya Thongtaeng , Samart Khumplee

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Savitree N.

Technical Management

Savitree Naisangam
Manager
วส.045557 3-204-9-4709

Approved by

Kanokkom Anek
Senior Manager
กนกคอม อเนก
วส.045557 3-204-9-6111

Kanokkom Anek

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NIGHT SOLUTIONS HIGHEST PRIORITY

480-SH (THAI)

S. Srisopha, AL. Co. (P) (24THU)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location: ESIE

TESTING
No.0042
Lot ID: 22129821
Date Received : Nov 02, 2022
Date Reported : Nov 09, 2022
Report Number : 2473848-3

Page 1 of 1

Sample Number	22129821-1
Sampled Date	Nov 02, 2022 3:21 PM
Sample Description	Wastewater
Contract ID	L ESIE 012 2550
Plot	E-14
Site	Auto Alliance (Thailand) Co., Ltd.
Location	Chemical
Date Analysis Commenced	Nov 03, 2022
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards
Physical Property	Yellow, some odour, solid and turbid

Analyte	Unit	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing						
Iron	mg/L	0.003	0.005	≤10.0	Based on APHA (2017), 3125	Bangkok
Fluoride	mg/L	0.05	0.2	≤5	APHA (2017), 4500-F(C)	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pitthaya Thonglaeng , Samart Khumplee

- Remark :
- LOD : Limit of Detection
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 - Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
 - (A) Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, DSS Accreditation No. 0009.
 - The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17

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Approved by

Dej Changchon
Senior Manager

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location: ESIE

TESTING
No.0042
Lot ID: 22129833
Date Received : Nov 02, 2022
Date Reported : Nov 09, 2022
Report Number : 2473854-1

Page 1 of 1

Sample Number	22129833-1
Sampled Date	Nov 02, 2022 3:05 PM
Sample Description	Wastewater
Contract ID	L ESIE 012 2550
Plot	E-14
Site	Auto Alliance (Thailand) Co., Ltd.
Location	Office
Date Analysis Commenced	Nov 02, 2022
Condition of Sample	Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	8	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	35	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	62	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	61	≤600	APHA (2017), 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.0	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.6	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	444	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	10	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pitthaya Thonglaeng , Samart Khumplee

- Remark :
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Technical Management

Narumon Benchongkij
Supervisor

Approved by

Dej Changchon
Senior Manager

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

p/o :

Project Name : Random Check

Project Location: ESIE

Page 1 of 1

Sample Number	22129833-1					
Sample Date	Nov 02, 2022 3:05 PM					
Sample Description	Wastewater					
Contract ID	L_ESTE_012_2550	Plot	E-14	Site	Auto Alliance (Thailand) Co., Ltd.	
Location	Office					
Date Analysis Commenced	Nov 03, 2022					
Condition of Sample	Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)					
Physical Property	Yellow, some odour, solid and no turbid					
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Testing Location
Water Testing Fluoride	mg/L	0.05	0.2	<0.2	≤5	APHA (2017), 4500-F(C) Rajong

Guideline: Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pitthaya Thongtaeng, Samart Khumphlee

Remark :
- LOD : Limit of Detection

- "L" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Answered by

Karte - Aufh.

Каноккорт Анек

ทะเบียนเลขที่ 7-204-ก-6111

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory Monthly
Project Location: ESIE

Page 1 of 1

Sample Number 22140313-1
Sampled Date Dec 06, 2022 3:39 PM
Sample Description Wastewater
Contract ID L-ESIE-012_2550
Plot E-14
Site Auto Alliance (Thailand) Co., Ltd.
Location Office
Date Analysis Commenced Dec 06, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	27	<500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	41	<750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	3	<10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *	-	-	-	7.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.3	<45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	9	<200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Piramnet Sattayakun , Smart Khumplinee

Remark :
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- %* : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management

Approved by
Narumon Banchongkitt
Supervisor
ติดต่อเราที่ 7-207-9-9445

Senior Manager

Approved by
Dej Chingchon
Senior Manager
ติดต่อเราที่ 7-207-9-9442

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory Monthly
Project Location: ESIE

Page 1 of 1

Sample Number 22140313-1
Sampled Date Dec 06, 2022 3:39 PM
Sample Description Wastewater
Contract ID L-ESIE-012_2550
Plot E-14
Site Auto Alliance (Thailand) Co., Ltd.
Location Office
Date Analysis Commenced Dec 07, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.06	<5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Piramnet Sattayakun , Smart Khumplinee

Remark :
- LOD : Limit of Detection
- %* : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Approved by
Savitree Naisanglam
Manager
ติดต่อเราที่ 7-207-9-9709

Senior Manager

Approved by
Kanokkorn Anek
Senior Manager
ติดต่อเราที่ 7-207-9-6111

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5/Report, AL-GL-01 (1.18amv)



Analysis / Test Report

TESTING
No.0042

Lot ID: 22140269
Date Received : Dec 06, 2022
Date Reported : Dec 13, 2022
Report Number : 2505072-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Puakdaeng, Amphur Puakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 1 of 2

Sample Number 22140269-1
Sample Date Dec 06, 2022 3:55 PM
Sample Description Wastewater
Contract ID L_ESIE_013.2550 Plot E-14 Site Auto Alliance (Thailand) Co., Ltd.
Location Chemical
Date Analysis Commenced Dec 06, 2022
Condition of Sample Contained in one amber glass bottle and five plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, a lot of solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	13	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	41	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Cyanide as HCN *	mg/L	0.001	0.005	<0.005	≤0.2	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-CN (C, E)	Rayong
Oil & Grease *	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *	-	-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.0	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	5	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant
Sampled By : Poramet Sattayakun , Samart Khumthalee

Remark :
- LOD : Limit of Detection

Technical Management

N. Banphat
Narumon Banchongkitt
Supervisor
โทรศัพท์ ๖-323-๙-9445

Approved by

D. Juman
Dej Changchon
Senior Manager
โทรศัพท์ ๖-323-๙-9442

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Analysis / Test Report

TESTING
No.0042

Lot ID: 22140269
Date Received : Dec 06, 2022
Date Reported : Dec 13, 2022
Report Number : 2505072-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Puakdaeng, Amphur Puakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 2 of 2

- "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyzed sample(s) not included in scope of Accreditation ISO/IEC 17025
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphat
Narumon Banchongkitt
Supervisor
โทรศัพท์ ๖-323-๙-9445

Approved by

D. Juman
Dej Changchon
Senior Manager
โทรศัพท์ ๖-323-๙-9442

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Analysis / Test Report

TESTING
No.0009
Lot ID: 22140269
Date Received : Dec 06, 2022
Date Reported : Dec 13, 2022
Report Number : 2505072-2

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331, Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory 1 Monthly
Project Location: ESIE

Page 1 of 1

Sample Number 22140269-1
Sampled Date Dec 06, 2022 3:55 PM
Sample Description Wastewater
Contract ID L_ESIE_013_2550
Plot E-14
Site Auto Alliance (Thailand) Co., Ltd.
Location Chemical
Date Analysis Commenced Dec 07, 2022
Condition of Sample Contained in one amber glass bottle and five plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, a lot of solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Nickel	mg/L	0.0003	0.0005	0.06	≤1.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.29	≤5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant
Sampled By : Paramet Satsayakun , Samart Khumphet

Remark :
- LOD : Limit of Detection
- "c" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management *Savitree N.*
Savitree Nongsam
Manager
ติดต่อเราที่ 7-204-4-709

Approved by *Kanokorn Anuk*
Kanokorn Anuk
Senior Manager
ติดต่อเราที่ 7-204-4-6111

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Analysis / Test Report

TESTING
No.0042
Lot ID: 2275573
Date Received : Jul 07, 2022
Date Reported : Jul 14, 2022
Report Number : 2351328-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331, Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory 1 Monthly
Project Location: ESIE

Page 1 of 1

Sample Number 2275573-1
Sampled Date Jul 07, 2022 9:38 AM
Sample Description Wastewater
Contract ID L_ESIE_002_2553
Plot 1-15D
Site COREMAX (Thailand) Company Limited.
Date Analysis Commenced Jul 07, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Colorless, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	20	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	32.4	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant
Sampled By : Pithaya Thongtaeng , Panunpong Manit

Remark :
- LOD : Limit of Detection
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Technical Management *N. Banphat*
Narumon Banchoangkit
Supervisor
ติดต่อเราที่ 7-323-4-9445

Approved by *D. Juman*
Dej Changchon
Senior Manager
ติดต่อเราที่ 7-323-4-9442

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location : ESIE

TESTING
No. 0009

Lot ID: 2275573

Date Received : Jul 07, 2022

Date Reported : Jul 15, 2022

Report Number: 2351328-2

Page 1 of 1

Sample Number 2275573-1
Sampled Date Jul 07, 2022 9:38 AM
Sample Description Wastewater
Contract ID L ESIE_002_2553 Plot 1-15D Site COREMAX (Thailand) Company Limited.
Date Analysis Commenced Jul 08, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Colorless, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Manganese	mg/L	0.0003	0.0005	0.02	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pittaya Thongdaeng, Panupong Manit

Remark :

- LOD : Limit of Detection
- "L" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management

Savitree N.

Savitree Nolsangiam
Manager

โทร 09-0000-1709

Approved by

Kanokorn Anek

Kanokorn Anek
Senior Manager

โทร 09-0000-6111

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location : ESIE

TESTING
No. 0042

Lot ID: 2288447

Date Received : Aug 05, 2022

Date Reported : Aug 11, 2022

Report Number: 2382598-1

Page 1 of 1

Sample Number 2288447-1
Sampled Date Aug 05, 2022 9:04 AM
Sample Description Wastewater
Contract ID L ESIE_002_2553 Plot 1-15D Site COREMAX (Thailand) Company Limited.
Date Analysis Commenced Aug 05, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Colorless, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	<5	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.9	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	28.8	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pittaya Thongdaeng, Thansouk Namakumma

Remark :

- LOD : Limit of Detection
- "L" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management

N. Banphit

Narumon Banchoangkit
Supervisor

โทร 09-0000-9445

Approved by

D. Chuan

D. Chuan
Senior Manager

โทร 09-0000-9442

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Puakdaeng, Amphur Puakdaeng, Rayong
Thailand 21140

Project Name : Factory / Monthly
Project Location : ESIE

Lot ID: 2288447
Date Received : Aug 05, 2022
Date Reported : Aug 13, 2022
Report Number : 2382598-2

TESTING
No.0009

Sample Number 2288447-1
Sample Date Aug 05, 2022 9:04 AM
Sample Description Wastewater
Contract ID L_ESIE_002_2553 **Plot** F-150 **Site** COREMAX (Thailand) Company Limited.
Date Analysis Commenced Aug 08, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Colorless, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Manganese	mg/L	0.0003	0.0005	0.04	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pichaya Thongdaeng , Thanosoun Namakunna

Remark :
- LOD : Limit of Detection
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Technical Management

Chanath L.
Chanatragam Inchoh
Supervisor
โทรสาร ๖๖-๐-๒๖๐๔-๔๗๑๐

Approved by

Kanokorn Anek
Kanokorn Anek
Senior Manager
โทรสาร ๖๖-๐-๒๖๐๔-๖๑๑๑

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Puakdaeng, Amphur Puakdaeng, Rayong
Thailand 21140

Project Name : Factory / Monthly
Project Location : ESIE

Lot ID: 22105719
Date Received : Sep 05, 2022
Date Reported : Sep 12, 2022
Report Number : 2416331-1

TESTING
No.0042

Sample Number 22105719-1
Sample Date Sep 05, 2022 9:30 AM
Sample Description Wastewater
Contract ID L_ESIE_002_2553 **Plot** F-150 **Site** COREMAX (Thailand) Company Limited.
Date Analysis Commenced Sep 05, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Colorless, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOO (5 days at 20 Degree C)	mg/L	-	2	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	6	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	8.1	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.0	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Paramet Sattayakun , Thanosoun Namakunna

Remark :
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Technical Management

N. Banphit
Narumon Banchongkit
Supervisor
โทรสาร ๖๖-๐-๒๖๐๔-๔๔๔๕

Approved by

D. Chuan
Dej Changchon
Senior Manager
โทรสาร ๖๖-๐-๒๖๐๔-๔๔๔๕

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

Lot ID: 22105719
Date Received : Sep 05, 2022
Date Reported : Sep 12, 2022
Report Number : 2416331-2

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Sample Number : 22105719-1
Sampled Date : Sep 05, 2022 9:30 AM
Sample Description : Wastewater
Contract ID : L_ESIE_002_2553 Plot : I-15D Site : COREMAX (Thailand) Company Limited.
Date Analysis Commenced : Sep 06, 2022
Condition of Sample : Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Colorless, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Manganese	mg/L	0.0003	0.0005	0.01	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Paramet Sattayakun , Thanasoun Namakuma

Remark :
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Technical Management

Savitree N.
Savitree Nongsangam
Manager
โทรศัพท์ 3-204-8-4709

Approved by

Kanokorn Anek
Kanokorn Anek
Senior Manager
โทรศัพท์ 3-204-8-6111

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

Lot ID: 22119013
Date Received : Oct 07, 2022
Date Reported : Oct 14, 2022
Report Number : 2448125-1

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Sample Number : 22119013-1
Sampled Date : Oct 07, 2022 9:45 AM
Sample Description : Wastewater
Contract ID : L_ESIE_002_2553 Plot : I-15D Site : COREMAX (Thailand) Company Limited.
Date Analysis Commenced : Oct 07, 2022
Condition of Sample : Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	5	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	8.0	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.3	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongasachai , Samart Khumpliee

Remark :
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Technical Management

N.Bangphit
Narumon Banchoangkit
Supervisor
โทรศัพท์ 3-323-4-9445

Approved by

Dhanu
Dej Changchon
Senior Manager
โทรศัพท์ 3-323-4-9442

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Analysis / Test Report

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Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

TESTING
No.0009

Lot ID: 22119013

Date Received : Oct 07, 2022
Date Reported : Oct 14, 2022
Report Number: 2448125-2

Page 1 of 1

Sample Number 22119013-1
Sampled Date Oct 07, 2022 9:45 AM
Sample Description Wastewater
Contract ID L ESIE 002_2553 Plot F-15D Site COREMAX (Thailand) Company Limited.
Date Analysis Commenced Oct 10, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Manganese	mg/L	0.0003	0.0005	0.02	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central

Wastewater Treatment Plant
Sampled By : Tanasit Wongsachai, Smart Khumphlee

Remark :
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Savitree N.
Savitree Naisinglam
Manager

Approved by

Kanokorn Anek
Senior Manager

Yodchaiwan 3-204-4-4709

Yodchaiwan 3-204-4-6111

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405-SU-DNAL

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

TESTING
No.0042

Lot ID: 22130407

Date Received : Nov 04, 2022
Date Reported : Nov 11, 2022
Report Number: 2475209-1

Page 1 of 1

Sample Number 22130407-1
Sampled Date Nov 04, 2022 9:12 AM
Sample Description Wastewater
Contract ID L ESIE 002_2553 Plot F-15D Site COREMAX (Thailand) Company Limited.
Date Analysis Commenced Nov 04, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Colorless, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	7	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.8	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.7	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤500	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central

Wastewater Treatment Plant
Sampled By : Tanasit Wongsachai, Smart Khumphlee

Remark :
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Technical Management

N. Banphit
Narumon Banchoangkit
Supervisor

Approved by

D. Chuan
Daj Changchon
Senior Manager

Yodchaiwan 3-323-4-9445

Yodchaiwan 3-323-4-9442

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405-SU-DNAL

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Plaekdaeng, Amphur Plaekdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

TESTING
No.0009
Lot ID: 22130407
Date Received : Nov 04, 2022
Date Reported : Nov 11, 2022
Report Number : 2475309-2

Page 1 of 1

Sample Number 22130407-1
Sample Date Nov 04, 2022 9:12 AM
Sample Description Wastewater
Contract ID L ESIE 002_2553 Plot 1-15D Site COREMAX (Thailand) Company Limited.
Date Analysis Commenced Nov 07, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Colorless, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Manganese	mg/L	0.0003	0.0005	0.02	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Tanasit Wongasachai, Samart Khumpluee

Remark :
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Technical Management

Savitree N.
Savitree Naisingam
Manager
๖๕๓๖๖๖๖ ๖-๒๐๔-๔-๖๗๐

Approved by

Kanokorn Anek
Senior Manager
๖๕๓๖๖๖๖ ๖-๒๐๔-๔-๖๗๑

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Plaekdaeng, Amphur Plaekdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

TESTING
No.0042
Lot ID: 22140299
Date Received : Dec 02, 2022
Date Reported : Dec 10, 2022
Report Number : 2505194-1

Page 1 of 1

Sample Number 22140299-1
Sample Date Dec 02, 2022 9:36 AM
Sample Description Wastewater
Contract ID L ESIE 002_2553 Plot 1-15D Site COREMAX (Thailand) Company Limited.
Date Analysis Commenced Dec 02, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Colorless, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	<5	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.0	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Pritayla Thongpaeng, Panupong Manit

Remark :
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Technical Management

N. B. Manit
Narumon Banchoangkit
Supervisor
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Approved by

D. Manit
Dej Changchon
Senior Manager
๖๕๓๖๖๖๖ ๖-๓๒๓-๔-๙๔๔2

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Analysis / Test Report

TESTING
No. 0009

Lot ID: 22140299
Date Received : Dec 02, 2022
Date Reported : Dec 10, 2022
Report Number : 2505194-2

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 1 of 1

Sample Number 22140299-1
Sampled Date Dec 02, 2022 9:36 AM
Sample Description Wastewater
Contract ID L ESIE 002, 2553 Plot 1-15D Site COREMAX (Thailand) Company Limited.
Date Analysis Commenced Dec 06, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Colorless, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Manganese	mg/L	0.0003	0.0005	0.02	≤5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Phibuya Thongtaeng , Panupong Manit

Remark :
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Technical Management

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Analysis / Test Report

TESTING
No. 0042

Lot ID: 2275241
Date Received : Jul 07, 2022
Date Reported : Jul 14, 2022
Report Number : 2349730-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 1 of 1

Sample Number 2275241-1
Sampled Date Jul 07, 2022 3:15 PM
Sample Description Wastewater
Contract ID L ESIE 043, 2550 Plot E-01 Site Emerson Electric (Thailand) Co., Ltd.
Date Analysis Commenced Jul 07, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	45	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	125	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.5	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	32.0	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	49	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongachai

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Technical Management

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Approved by

D. Chuan.
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Analysis / Test Report

TESTING
No.0042
Lot ID: 2288132

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
Date Received : Aug 05, 2022
Date Reported : Aug 11, 2022
Report Number : 22882361-1

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 1 of 1

Sample Number	2288132-1
Sampled Date	Aug 05, 2022 3:32 PM
Sample Description	Wastewater
Contract ID	L-ESIE-043_2550
Plot	E-01
Site	Emerson Electric (Thailand) Co., Ltd.
Date Analysis Commenced	Aug 05, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	66	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	114	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	31.9	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	29	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongasachai

Remark :

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Technical Management

N. Bangphit

Natunon Banchongkitt
Supervisor
โทรศัพท์ ๐-๒๓๓-๔-๙๔๔5

Approved by

D. Chuan

Dej Changchon
Senior Manager
โทรศัพท์ ๐-๒๓๓-๔-๙๔๔2

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SCS0001261-01 (6/2019)



Analysis / Test Report

TESTING
No.0042
Lot ID: 2288394

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
Date Received : Sep 12, 2022
Date Reported : Sep 19, 2022
Report Number : 2415105-1

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 1 of 1

Sample Number	2288394-1
Sampled Date	Sep 12, 2022 11:04 AM
Sample Description	Wastewater
Contract ID	L-ESIE-043_2550
Plot	E-01
Site	Emerson Electric (Thailand) Co., Ltd.
Date Analysis Commenced	Sep 12, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	37	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	62	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.6	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	24	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Paramet Sattayakun

Remark :

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Technical Management

N. Bangphit

Natunon Banchongkitt
Supervisor
โทรศัพท์ ๐-๒๓๓-๔-๙๔๔5

Approved by

D. Chuan

Dej Changchon
Senior Manager
โทรศัพท์ ๐-๒๓๓-๔-๙๔๔2

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SCS0001261-01 (6/2019)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

TESTING
No.0042
Lot ID: 22104540
Date Received : Oct 05, 2022
Date Reported : Oct 11, 2022
Report Number : 2447122-1

Page 1 of 1

Sample Number	22104540-1
Sample Date	Oct 05, 2022 3:35 PM
Sample Description	Wastewater
Contract ID	L ESIE_043_2550
Plot	E-01
Site	Emerson Electric (Thailand) Co., Ltd.
Date Analysis Commenced	Oct 05, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	29	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	72	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Based on APHA (2017), 4500-H (E)	Rayong
Temperature *	Degree C	-	-	30.9	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	20	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanak Wongsachai

Remark :
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Technical Management

N. Banphit
Narumon Bandhongkitt
Supervisor
หมายเลข 3-323-4-9445

Approved by

D. Jumsa
Dej Changchon
Senior Manager
หมายเลข 3-323-4-9442

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508999, AL-01, 011, 13, 0194



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

TESTING
No.0042
Lot ID: 22118906
Date Received : Nov 04, 2022
Date Reported : Nov 11, 2022
Report Number : 2473882-1

Page 1 of 1

Sample Number	22118906-1
Sample Date	Nov 04, 2022 3:02 PM
Sample Description	Wastewater
Contract ID	L ESIE_043_2550
Plot	E-01
Site	Emerson Electric (Thailand) Co., Ltd.
Date Analysis Commenced	Nov 04, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	12	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	55	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.2	5.5-9.0	Based on APHA (2017), 4500-H (E)	Rayong
Temperature *	Degree C	-	-	29.2	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	15	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pittaya Thongtaeng

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Technical Management

N. Banphit
Narumon Bandhongkitt
Supervisor
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Approved by

D. Jumsa
Dej Changchon
Senior Manager
หมายเลข 3-323-4-9442

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48551 (PWL)

508999, AL-01, 011, 13, 0194



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331, Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

TESTING
No.0042
Lot ID: 22139987
Date Received : Dec 06, 2022
Date Reported : Dec 12, 2022
Report Number : 2504211-1

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number 2213987-1
Sample Date Dec 06, 2022 2:15 PM
Sample Description Wastewater
Contract ID L_ESIE_043_2550 Plot E-01 Site Emerson Electric (Thailand) Co., Ltd.
Date Analysis Commenced Dec 06, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing BOD (5 days at 20 Degree C)	mg/L	-	2	44	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	86	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	7	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4530 - H (5)	Rayong
Temperature *	Degree C	-	-	31.4	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	28	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongkachai

Remark :
- LOD : Limit of Detection
- <LOD : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * : Ignored not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management
N. Banphit
Supervisor
vudhuanph 7-323-a-9445

Approved by
Dej Changchon
Senior Manager
vudhuanph 7-323-a-9442

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Life Sciences www.alsglobal.com

400-911-1940

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S. Pongpan, M. G. Ong, L. Lohani



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331, Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

TESTING
No.0042
Lot ID: 2260209
Date Received : Jan 01, 2022
Date Reported : Jan 09, 2022
Report Number : 2317581-1

P/O :
Project Name : Random Check
Project Location : ESIE

Sample Number 2260209-1
Sample Date Jan 01, 2022 3:58 PM
Sample Description Wastewater
Contract ID L_ESIE_135_2550 Plot L-45 Site Sanku Gosei Technology (Thailand) Co., Ltd.
Date Analysis Commenced Jan 01, 2022
Condition of Sample Contained in two glass vials, one amber glass bottle and seven plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing BOD (5 days at 20 Degree C)	mg/L	-	2	99	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	253	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	APML	-	5	33	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	APML	-	5	30	≤600	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	0.005	<0.005	≤0.2	Based on APHA (2017), 4500-CN(C), (E)	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater Analysis	Rayong
Oil & Grease *	mg/L	-	3	6	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.9	5.5-9.0	Based on APHA (2017), 4530 H	Rayong
Phenol	mg/L	0.005	0.01	0.04	≤1	APHA (2017), 5530 D	Rayong
Temperature *	Degree C	-	-	29.6	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	636	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	88	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongkachai, Paeupong Nant

Remark :
- LOD : Limit of Detection
- <LOD : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management
N. Banphit
Supervisor
vudhuanph 7-323-a-9445

Approved by
Dej Changchon
Senior Manager
vudhuanph 7-323-a-9442

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S. Pongpan, M. G. Ong, L. Lohani



Analysis / Test Report

TESTING
No.0042
Lot ID: 228257
Date Received : Aug 03, 2022
Date Reported : Aug 09, 2022
Report Number : 2382830-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory 1 Monthly

Project Location: ESIE

Page 1 of 1

Sample Number	228257-1
Sample Date	Aug 03, 2022 3:38 PM
Sample Description	Wastewater
Contract ID	L/ESIE_135_2550
Plot	I-45
Site	Sankho Gosei Technology (Thailand) Co., Ltd.
Date Analysis Commenced	Aug 03, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	55	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	134	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.6	5.5-9.0	Based on APHA (2017), 4500-H (6)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	46	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasak Wongsachai

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analysis marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphit

Niramon Benchongkit
Supervisor
โทรศัพท์ 7-323-9-9445

Approved by

D. Chongchon

Dej Chongchon
Senior Manager
โทรศัพท์ 7-323-9-9442

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486-51/2048

SLP000004_01_01 (1/18/04)



Analysis / Test Report

TESTING
No.0042
Lot ID: 2275346
Date Received : Jul 08, 2022
Date Reported : Jul 15, 2022
Report Number : 2350053-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory 1 Monthly

Project Location: ESIE

Page 1 of 1

Sample Number	2275346-1
Sample Date	Jul 08, 2022 9:05 AM
Sample Description	Wastewater
Contract ID	L/ESIE_135_2550
Plot	I-45
Site	Sankho Gosei Technology (Thailand) Co., Ltd.
Date Analysis Commenced	Jul 08, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	60	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	154	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.5	5.5-9.0	Based on APHA (2017), 4500-H (6)	Rayong
Temperature *	Degree C	-	-	30.3	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	46	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Chulissorn Lermthakulchai

Remark :

- LOD : Limit of Detection
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- Analysis marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphit

Niramon Benchongkit
Supervisor
โทรศัพท์ 7-323-9-9445

Approved by

D. Chongchon

Dej Chongchon
Senior Manager
โทรศัพท์ 7-323-9-9442

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486-51/2048

SLP000004_01_01 (1/18/04)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Sample Number 22130068-1

Sampled Date Nov 02, 2022 1:43 PM
Sample Description Wastewater
Contract ID L_ESIE_135_2550 Plot 1-45 Site Sanko Gosei Technology (Thailand) Co., Ltd.
Data Analysis Commenced Nov 02, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odor, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	48	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	114	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.9	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.1	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	46	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pratyae Thonglaeng

- Remark :
• LOD : Limit of Detection
• %* : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
• Analyte(s) marked * refers not included in scope of Accreditation ISO/IEC 17025.
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Technical Management

N. Banphit

Narumon Banphongkitt
Supervisor
WU-01000007-3-323-a-9445

Approved by

D. Chongchon

Dag Chongchon
Senior Manager
WU-01000007-3-323-a-9442

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51899999_01_01_01 (12/10/21)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Sample Number 22140093-1

Sampled Date Dec 06, 2022 10:21 AM
Sample Description Wastewater
Contract ID L_ESIE_135_2550 Plot 1-45 Site Sanko Gosei Technology (Thailand) Co., Ltd.
Data Analysis Commenced Dec 06, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odor, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	84	≤500	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	297	≤750	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	15	≤10	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2017, part 5520 B	Rayong
pH (on site) *	-	-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2017, part 2550 B	Rayong
Temperature *	Degree C	-	-	29.5	≤45	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2017, part 2540 D	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	106	≤200	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Parameet Sateyayakun

- Remark :
• LOD : Limit of Detection
• %* : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
• Analyte(s) marked * refers not included in scope of Accreditation ISO/IEC 17025.
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Technical Management

N. Banphit

Narumon Banphongkitt
Supervisor
WU-01000007-3-323-a-9445

Approved by

D. Chongchon

Dag Chongchon
Senior Manager
WU-01000007-3-323-a-9442

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480517 ENGL

51899999_01_01_01 (12/10/21)

บริษัท สบดินสยาม จำกัด (มหาชน)
WHA Utilities and Power Public Company Limited

POTABLE WATER

Company: BRIDGESTONE METALPHA (THAILAND) CO., LTD. Asof Date 19-Jul-22
Plot No. : E - 16 , 17

ITEM	CURRENT READING		PREVIOUS READING		CONSUMED (CU. M)	REMARKS
	D/M/Y	READING	D/M/Y	READING		
1	30-Dec-21	18,886.00	15-Dec-21	11,953.00	6,933.00	
2	20-Jan-22	28,876.00	30-Dec-21	18,886.00	9,990.00	
3	18-Feb-22	44,467.00	20-Jan-22	28,876.00	15,591.00	
4	18-Mar-22	59,716.00	18-Feb-22	44,467.00	15,249.00	
5	31-Mar-22	67,413.00	18-Mar-22	59,716.00	7,697.00	
6	20-Apr-22	76,636.00	31-Mar-22	67,413.00	9,223.00	
7	20-May-22	92,935.00	20-Apr-22	76,636.00	16,299.00	
8	20-Jun-22	110,774.00	20-May-22	92,935.00	17,839.00	
9	30-Jun-22	116,497.00	20-Jun-22	110,774.00	5,723.00	
10	20-Jul-22	128,146.00	30-Jun-22	116,497.00	11,649.00	
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
Total	20-Jul-22	128,146.00	20-Jun-22	110,774.00	17,372.00	This Period

REPORTED BY: 

CHECKED BY: 

DATE: 19-Jul-22

บริษัท อีสเทิร์น ซีบอร์ด อินดัสเตรียล เอสเตท (ระยอง) จำกัด
Eastern Seaboard Industrial Estate(Rayong) Company Limited

Wastewater Treatment Service Charges

Customer: BRIDGESTONE METALPHA (THAILAND) CO., LTD.

Location: E - 16 , 17

Billing Period : Jul/2022

Cx = Excursion factor[(5.52 Vx) + (11.05 Bx)] + LAB FEE

Line 1 BOD Concentration (mg/l) = 12.0000 See report from ALS
Line 2 Lab Fees (Baht) = 1,050.00 See invoice from ALS, price before VAT

Line 3	Calculating Vx					
	Potable Water	5,723.00	x	0.80	=	4,578.40 (m ³)
	Potable Water	11,649.00	x	0.80	=	9,319.20 (m ³)
			x		=	(m ³)
			x		=	(m ³)
Line 4	Total Vx				=	13,897.60 (m ³)
Line 5	5.52 Vx			Unit Rate	x	5.52 (Baht/m ³)
					=	76,714.75 (Baht)
	Bx = BOD x Vx	0.0120000	x	13,897.60	=	166.77 (Baht)
Line 6	11.05 Bx			Unit Rate	x	11.05
					=	1,842.81 (Baht)
	COST = Line 5 + Line 6				=	78,557.56
Line 7	EXCURSION Factor			(BOD not exceeding limited)	x	1.00
	TOTAL COST				=	78,557.56 (Baht)
Line 8	LAB FEES = Line 2				=	1,050.00 (Baht)
Line 9	UTILITY COST Cx = Line 7 + Line 8			before VAT	=	79,607.56 (Baht)

Remark Number of times exceeding quality standard in the last 24 months = 0

REPORTED BY: 

CHECKED BY: 



Analysis / Test Report

TESTING
No.0009

Lot ID: 2288124

Date Received : Aug 03, 2022

Date Reported : Aug 15, 2022

Report Number : 2382074-2

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.

112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong

Thailand 21140

P/O : Random Check

Project Name : Random Check

Project Location : ESIE

Page 1 of 1

Sample Number 2288124-1
Sampled Date Aug 03, 2022 2:30 PM
Sample Description Wastewater
Contract ID L_ESTIE_024_2550 Plot E-16,17 Site Bridgestone Metalpha (Thailand) Co., Ltd.
Date Analysis Commenced Aug 04, 2022
Condition of Sample Contained in two glass vials, one amber glass bottle and eight plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.005	≤0.25	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.0003	0.0005	0.08	≤1.0	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.0003	0.0005	0.39	≤2.0	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	<0.01	≤0.25	Based on APHA (2017), 3500-Cr (B)	Bangkok
Lead	mg/L	0.0003	0.0005	0.002	≤0.2	Based on APHA (2017), 3125	Bangkok
Manganese	mg/L	0.0003	0.0005	0.03	≤5.0	Based on APHA (2017), 3125	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Based on APHA (2017), 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.004	≤1.0	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.0003	0.0005	<0.0005	≤0.02	Based on APHA (2017), 3125	Bangkok
Trivalent Chromium *	mg/L	-	0.01	0.01	≤0.75	Based on APHA (2017), Calculated	Bangkok
Zinc	mg/L	0.003	0.005	0.82	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wonggachai, Panupong Manit

Remark :
- LOD : Limit of Detection
- "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management
Savitree N.
Savitree Nolsanglam
Manager
โทรศัพท์ 7-204-4-4709

Approved by
Kankorn Anek
Senior Manager
โทรศัพท์ 7-204-4-6111

ADDRESS 104 Phatthanakan 40, Phatthanakan Rd., Khwaeng Phatthanakan, Khet Suan Luang, Bangkok 10250 Thailand PHONE +66 0 2760 3000 FAX +66 0 2760 3187
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Analysis / Test Report

TESTING
No.0042

Lot ID: 2288124

Date Received : Aug 03, 2022

Date Reported : Aug 15, 2022

Report Number : 2382074-3

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.

112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong

Thailand 21140

P/O : Random Check

Project Name : Random Check

Project Location : ESIE

Page 1 of 1

Sample Number 2288124-1
Sampled Date Aug 03, 2022 2:30 PM
Sample Description Wastewater
Contract ID L_ESTIE_024_2550 Plot E-16,17 Site Bridgestone Metalpha (Thailand) Co., Ltd.
Date Analysis Commenced Aug 04, 2022
Condition of Sample Contained in two glass vials, one amber glass bottle and eight plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Iron	mg/L	0.003	0.005	0.37	≤10.0	Based on APHA (2017), 3125	Bangkok
Fluoride	mg/L	0.05	0.2	1.0	≤5	APHA (2017), 4500-F(C)	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wonggachai, Panupong Manit

Remark :
- LOD : Limit of Detection
- "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, DSS Accreditation No. 0009.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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Approved by
D. Jangam
Dej Jangchon
Senior Manager

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Analysis / Test Report

TESTING
No.0042
Lot ID: 22105746
Date Received : Sep 14, 2022
Date Reported : Sep 19, 2022
Report Number : 2416393-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331, Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 1 of 1

Sample Number 22105746-1
Sample Date Sep 14, 2022 10:00 AM
Sample Description Wastewater
Contract ID L ESIE-024_2550 Plot E-16,17 Site Bridgestone Metalpha (Thailand) Co., Ltd.
Date Analysis Commenced Sep 14, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	24	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	91	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.5	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	32.4	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	26	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Wanlop Hunchaimaow

Remark :
- LOD : Limit of Detection
- <LOQ : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Bangphit
Naumon Banchonglitt
Supervisor
โทรศัพท์ ๐๖-๓๓๐๔-๙๔๔๕

Approved by

D. Jumsan
Dej Changchon
Senior Manager
โทรศัพท์ ๐๖-๓๓๐๔-๙๔๔๕

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Analysis / Test Report

TESTING
No.0042
Lot ID: 22119036
Date Received : Oct 12, 2022
Date Reported : Oct 17, 2022
Report Number : 2448193-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331, Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 1 of 1

Sample Number 22119036-1
Sample Date Oct 12, 2022 10:13 AM
Sample Description Wastewater
Contract ID L ESIE-024_2550 Plot E-16,17 Site Bridgestone Metalpha (Thailand) Co., Ltd.
Date Analysis Commenced Oct 12, 2022
Condition of Sample Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, a lot of solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	9	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	36	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	32.6	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	13	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongasachal

Remark :
- LOD : Limit of Detection
- <LOQ : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
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Technical Management

N. Bangphit
Naumon Banchonglitt
Supervisor
โทรศัพท์ ๐๖-๓๓๐๔-๙๔๔๕

Approved by

D. Jumsan
Dej Changchon
Senior Manager
โทรศัพท์ ๐๖-๓๓๐๔-๙๔๔๕

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LIFE SCIENCES

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S:\Report_AJ_GL_01 (3-39H)



Analysis / Test Report

TESTING
No.0042

Lot ID: 22130415

Date Received : Nov 07, 2022

Date Reported : Nov 14, 2022

Report Number : 2475470-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.

112 Moo 4, Highway 331 Road, Tambol Puakdaeng, Amphur Puakdaeng, Rayong

Thailand 21140

P/O : Project Name : Factory / Monthly

Project Location: ESIE

Page 1 of 1

Sample Number	22130415-1
Sampled Date	Nov 07, 2022 3:30 PM
Sample Description	Wastewater
Contract ID	L ESIE 024 2550
Plot	E-16,17
Site	Bridgestone Metalpla (Thailand) Co., Ltd.
Date Analysis Commenced	Nov 07, 2022
Condition of Sample	Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, some colour, a lot of solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	7	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	38	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.5	5.5-9.0	Based on APHA (2017), 4500-H (E)	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Based on APHA (2017), 4500-S2(C), (F)	Rayong
Temperature *	Degree C	-	-	33.5	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	14	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongaschal

Remark :
- LOD : Limit of Detection
- "LOQ" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
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N. Bangpit

Technical Management

Narumon Banchoangkit
Supervisor
วิบูลย์ธรรม 3-323-9-9445

Approved by

Dej Changchon
Senior Manager
วิบูลย์ธรรม 3-323-9-9442

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S:\Reports_AU_01 ref 1.3.0019



Analysis / Test Report

TESTING
No.0042

Lot ID: 22140327

Date Received : Dec 02, 2022

Date Reported : Dec 10, 2022

Report Number : 2505303-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.

112 Moo 4, Highway 331 Road, Tambol Puakdaeng, Amphur Puakdaeng, Rayong

Thailand 21140

P/O : Project Name : Factory / Monthly

Project Location: ESIE

Page 1 of 2

Sample Number	22140327-1
Sampled Date	Dec 02, 2022 3:11 PM
Sample Description	Wastewater
Contract ID	L ESIE 024 2550
Plot	E-16,17
Site	Bridgestone Metalpla (Thailand) Co., Ltd.
Date Analysis Commenced	Dec 02, 2022
Condition of Sample	Contained in one amber glass bottle and four plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, some colour, a lot of solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	31	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	77	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	7.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Sulfide *	mg/L	-	0.5	<0.5	≤1.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-S2 (C, F)	Rayong
Temperature *	Degree C	-	-	35.3	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	31	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Paramet Sattayakun

Remark :
- LOD : Limit of Detection
- "LOQ" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

N. Bangpit

Technical Management

Narumon Banchoangkit
Supervisor
วิบูลย์ธรรม 3-323-9-9445

Approved by

Dej Changchon
Senior Manager
วิบูลย์ธรรม 3-323-9-9442

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Analysis / Test Report

Client: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phadkhaeng, Amphur Phadkhaeng, Rayong
Thailand 21140
P/O :
Project Name : Random Check
Project Location : ESTE

TESTING
No. 0042
Lot ID: 2275159
Date Received : Jul 01, 2022
Date Reported : Jul 08, 2022
Report Number : 2349622-4

Page 1 of 1

Sample Number: 2275159-4
Sample Date: Jul 01, 2022 2:55 PM
Sample Description: Wastewater
Contract ID: L_ESE_028_2550 Plot PP-04 Site: CNK Manufacturing (Thailand) Co., Ltd.
Date Analysis Commenced: Jul 01, 2022
Conditions of Sample: Contained in two glass vials, one amber glass bottle and seven plastic bottles. Sample containers comply to pre-treatment - preservation standards (APHA / USEPA)
Physical Property: Yellow, a lot of colour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	67	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	196	≤750	APHA (2017), 5220 D	Rayong
Color (40 degree pH)	ADMT	-	5	109	≤600	APHA (2017), 2120 F	Rayong
Color (40 pH 7.0)	ADMT	-	5	107	≤600	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	0.005	Not Detected	≤0.2	Based on APHA (2017), 4600-CHCl ₃ (E)	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Based on APHA (2017), 5520 B	Rayong
pH (at 20°C)	-	-	-	7.6	5.5-9.0	Based on APHA (2017), 4690-H (E)	Rayong
Phenol	mg/L	0.005	0.01	0.05	≤1	APHA (2017), 5530 D	Rayong
Temperature	Degree C	-	-	30.1	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	308	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	42	≤200	APHA (2017), 2540 D	Rayong

Guideline: Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant.
Sampled By : Satorin Jansakul, Narasavit Sam

Result:
- LOD : Limit of Detection
- "<" : Lower than LOD (Limit of Quantitation) / LOQ (Limit of Reporting)
- Analyte(s) marked * have not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphit
Narumon Banphongit
Supervisor
Tel: 09-444-9445

Approved by

D. Chongkarn
Dij Chongkarn
Senior Manager
Tel: 09-444-9442

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Analysis / Test Report

Client: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phadkhaeng, Amphur Phadkhaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location : ESTE

TESTING
No. 0008
Lot ID: 2275159
Date Received : Jul 01, 2022
Date Reported : Jul 08, 2022
Report Number : 2349622-2

Page 1 of 1

Sample Number: 2275159-1
Sample Date: Jul 01, 2022 2:55 PM
Sample Description: Wastewater
Contract ID: L_ESE_028_2550 Plot PP-04 Site: CNK Manufacturing (Thailand) Co., Ltd.
Date Analysis Commenced: Jul 01, 2022
Conditions of Sample: Contained in two glass vials, one amber glass bottle and seven plastic bottles. Sample containers comply to pre-treatment - preservation standards (APHA / USEPA)
Physical Property: Yellow, a lot of colour, some acid and turbid

Analyte	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.003	0.0005	0.001	≤0.25	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.003	0.0005	0.09	≤1.0	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.003	0.0005	Not Detected	≤0.03	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.003	0.0005	0.04	≤2.0	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Based on APHA (2017), 3050-C (B)	Bangkok
Lead	mg/L	0.003	0.0005	0.007	≤0.2	Based on APHA (2017), 3125	Bangkok
Niagenese	mg/L	0.003	0.0005	0.06	≤5.0	Based on APHA (2017), 3125	Bangkok
Mercury *	mg/L	0.001	0.0005	<0.0005	≤0.005	Based on APHA (2017), 3112	Bangkok
Nickel	mg/L	0.003	0.0005	0.005	≤1.0	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.003	0.0005	<0.0005	≤0.02	Based on APHA (2017), 3125	Bangkok
Thallium Chromium *	mg/L	-	0.01	<0.01	≤0.75	Based on APHA (2017), Chlorinated	Bangkok
Zinc	mg/L	0.003	0.0005	0.20	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline: Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant.
Sampled By : Satorin Jansakul, Narasavit Sam

Result:
- LOD : Limit of Detection
- "<" : Lower than LOD (Limit of Quantitation) / LOQ (Limit of Reporting)
- Analyte(s) marked * have not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Chanatt L.
Chawattarn Jachon
Supervisor
Tel: 09-444-4710

Approved by

K. Aek
Kamkarn Aek
Senior Manager
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Analysis / Test Report

TESTING
No.0009
Lot ID: 2275159
Date Received : Jul 01, 2022
Date Reported : Jul 05, 2022
Report Number : 2349527-2

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Muakdaeng, Amphur Muakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Random Check
Project Location : ESIE

Page 1 of 1

Sample Number : 2275159-1
Sampled Date : Jul 01, 2022 2:55 PM
Sample Description : Wastewater
Contract ID : L-ESE-028-2550 Plot PP-14 Site CHK Manufacturing (Thailand) Co., Ltd.
Data Analysis Commenced : Jul 04, 2022
Condition of Sample : Contained in two glass vials, one amber glass bottle and seven plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odor, some solid and turbid

Analyte	Unit	LOQ (LOEL)	Result	Guideline / Specification	Method	Testing Location
Metallic Testing						
Arsenic	mg/L	0.0003	0.0005	0.001	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.0003	0.0005	0.09	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.0003	0.0005	0.04	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	Based on APHA (2017), 3500-Cr (9)	Bangkok
Lead	mg/L	0.0003	0.0005	0.007	Based on APHA (2017), 3125	Bangkok
Manganese	mg/L	0.0003	0.0005	0.05	Based on APHA (2017), 3125	Bangkok
Mercury *	mg/L	0.0001	0.0005	<0.0005	Based on APHA (2017), 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.005	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.0003	0.0005	<0.0005	Based on APHA (2017), 3125	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.03	Based on APHA (2017), Calculated	Bangkok
Zinc	mg/L	0.003	0.005	0.20	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Sittanorn Jansriy, Nantavak Sam

Remark :

- * LOQ : Limit of Detection
- * % : Lower than LOQ (Limit of Quantitation) / OR (Limit of Reporting)
- * Result(s) marked * where not included in scope of Accreditation ISO/IEC 17025
- * The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Chanatt L.
Chief/General In-charge
Supervisor

Approved by

Kat-An
Nantavak Sam
Senior Manager

waitswani 7-20-2-4710

waitswani 7-20-2-4711

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Sittanorn.Jansriy (+66) 9-465 0304



Analysis / Test Report

TESTING
No.0042
Lot ID: 2275159
Date Received : Jul 01, 2022
Date Reported : Jul 07, 2022
Report Number : 2349527-3

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Muakdaeng, Amphur Muakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Random Check
Project Location : ESIE

Page 1 of 1

Sample Number : 2275159-1
Sampled Date : Jul 01, 2022 2:55 PM
Sample Description : Wastewater
Contract ID : L-ESE-028-2550 Plot PP-04 Site CHK Manufacturing (Thailand) Co., Ltd.
Data Analysis Commenced : Jul 02, 2022
Condition of Sample : Contained in two glass vials, one amber glass bottle and seven plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odor, some solid and turbid

Analyte	Unit	LOQ (LOEL)	Result	Guideline / Specification	Method	Testing Location
Metallic Testing						
Iron	mg/L	0.003	0.005	0.25	Based on APHA (2017), 3125	Bangkok
Water Testing						
Fluoride	mg/L	0.05	0.2	0.2	APHA (2017), 4500-F/C	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Sittanorn Jansriy, Nantavak Sam

- Remark :
- * LOQ : Limit of Detection
 - * % : Lower than LOQ (Limit of Quantitation) / OR (Limit of Reporting)
 - * Result(s) marked * where not included in scope of Accreditation ISO/IEC 17025
 - * The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by

Dj
Dej Changchun
Senior Manager

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ALST 1188

Sittanorn.Jansriy (+66) 9-465 0304



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdang, Amphur Phukdang, Rayong
Thailand 21140
P/O :
Project Name : Factory Monthly
Project Location : ESIE



TESTING
No.0042
Lot ID: 2286290
Date Received : Aug 03, 2022
Date Reported : Aug 09, 2022
Report Number : 2286290-1

Page 1 of 1

Sample Number : 2286290-1
Sample Date : Aug 03, 2022 9:50 PM
Sample Description : Wastewater
Contract ID : L-ESIE_028_2350 Plot P4-04 Site CNK Manufacturing (Thailand) Co., Ltd.
Date Analysis Commenced : Aug 03, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA).
Physical Property : Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	92	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	229	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	10	≤10	Based on APHA (2017), 5520 B (B)	Rayong
pH (on site) *		-	-	7.8	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.4	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 Degree C	mg/L	-	5	46	≤200	APHA (2017), 2540 D	Rayong

Guidelines : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Pitthaya Thongkiew

Remark :
* LOD : Limit of Detection
* "C" : Lower than LOQ (Limit of Quantitation) / LOQ (Limit of Reporting)
* Analyte(s) not tested : Ignot not included in scope of Accreditation ISO/IEC 17025.
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Technical Management

N. Banjit

Narumon Benchongkit
Supervisor

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

Validation : 323-a-9445

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09010/0001

Signature: M. Banjit (Supv)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdang, Amphur Phukdang, Rayong
Thailand 21140
P/O :
Project Name : Factory Monthly
Project Location : ESIE



TESTING
No.0042
Lot ID: 22104429
Date Received : Sep 05, 2022
Date Reported : Sep 12, 2022
Report Number : 22104429-1

Page 1 of 1

Sample Number : 22104429-1
Sample Date : Sep 05, 2022 2:48 PM
Sample Description : Wastewater
Contract ID : L-ESIE_028_2350 Plot P4-04 Site CNK Manufacturing (Thailand) Co., Ltd.
Date Analysis Commenced : Sep 05, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA).
Physical Property : Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	109	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	192	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	8	≤10	Based on APHA (2017), 5520 B (B)	Rayong
pH (on site) *		-	-	7.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.5	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 Degree C	mg/L	-	5	35	≤200	APHA (2017), 2540 D	Rayong

Guidelines : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Pitthaya Thongkiew

Remark :
* LOD : Limit of Detection
* "C" : Lower than LOQ (Limit of Quantitation) / LOQ (Limit of Reporting)
* Analyte(s) not tested : Ignot not included in scope of Accreditation ISO/IEC 17025.
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Technical Management

N. Banjit

Narumon Benchongkit
Supervisor

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

Validation : 323-a-9442

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Signature: M. Banjit (Supv)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdang, Amphur Phukdang, Rayong
Thailand 21140
p/o :
Project Name : Factory / Monthly
Project Location: ESIE

Sample Number : 22118817-1
Sample Date : Oct 03, 2022 2:15 PM
Sample Description : Wastewater
Contract ID : L-ESIE_028_2550 Pkt PP-04 Site : CHK Manufacturing (Thailand) Co., Ltd.
Date Analysis Commenced : Oct 03, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation
Physical Property : Standards (APHA / USEPA)
Yellow, a lot of colour, some solid and turbid

Page 1 of 1

Analyte	Unit	LOD	LOQ (LOQ)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOC (5 days at 20 Degree C)	mg/L	-	2	54	\$500	APHA (2017), 5210 B	Rayong
COO	mg/L	1.5	5	186	\$750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	\$10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.5	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	28.3	\$45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	44	\$200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Paramet Saksayakum

Remark :

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Technical Management

N. Bangpit

Narumon Bandongit
Supervisor
Mobile Number : 092-4-9445

Approved by

D. Chongchun

Dei Chongchun
Senior Manager
Mobile Number : 092-4-9442

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ST/000001_01_01_01 (11/09)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdang, Amphur Phukdang, Rayong
Thailand 21140
p/o :
Project Name : Factory / Monthly
Project Location: ESIE

Sample Number : 22130124-1
Sample Date : Nov 02, 2022 10:30 AM
Sample Description : Wastewater
Contract ID : L-ESIE_028_2550 Pkt PP-04 Site : CHK Manufacturing (Thailand) Co., Ltd.
Date Analysis Commenced : Nov 02, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation
Physical Property : Standards (APHA / USEPA)
Yellow, a lot of colour, some solid and turbid

Page 1 of 1

Analyte	Unit	LOD	LOQ (LOQ)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOC (5 days at 20 Degree C)	mg/L	-	2	76	\$500	APHA (2017), 5210 B	Rayong
COO	mg/L	1.5	5	170	\$750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	\$10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.8	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.2	\$45	Based on APHA (2017), 2550 D	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	40	\$200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Paramet Saksayakum

Remark :

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Technical Management

N. Bangpit

Narumon Bandongit
Supervisor
Mobile Number : 092-4-9445

Approved by

D. Chongchun

Dei Chongchun
Senior Manager
Mobile Number : 092-4-9442

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Sample Number
22140145-1

Sample Date
Dec 01, 2022 9:22 AM

Sample Description
Wastewater

Contract ID
L-ESIE_078_2550 PW4 PD-M Site CRK Manufacturing (Thailand) Co., Ltd.

Site Analysis Commenced
Dec 01, 2022

Condition of Sample
Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)

Physical Property
Yellow, a lot of odor, some solid and turbid

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						Rayong
BOD (5 days at 20 Degree C)	mg/L	2	92	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	214	≤720	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	18	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5530 B	Rayong
pH (on site) *		-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 1950 - H (B)	Rayong
Temperature *	Degree C	-	29.0	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	37	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central

Wastewater Treatment Plant

Sampled By : Suwit Submitt

Remark :

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Technical Management

N. Banphit

Narumon Bandhugit

Supervisor

YINUMINITH 7-323-9-9445

Approved by

D. Chuanphon

Dig Chuanphon

Senior Manager

YINUMINITH 7-323-9-9442

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Signature: J. Banphit (13/10/20)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location : ESIE

Sample Number
21180307-1

Sample Date
Jan 12, 2022 2:12 PM

Sample Description
Wastewater

Contract ID
L-ESIE_055_2550 Plot 1-02 Site GRN Driveline (Thailand) Ltd.

Location
Factory 2

Date Analysis Commenced
Jan 12, 2022

Condition of Sample
Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)

Physical Property
Yellow, a lot of odor, some solid and no turbid

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						Rayong
BOD (5 days at 20 Degree C)	mg/L	2	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	16	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	7.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	36.7	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	<5	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central

Wastewater Treatment Plant

Sampled By : Pithaya Thongtiansang

- Remark :
- LOD : Limit of Detection
 - %C : Lower than LOD (Limit of Quantitation) / LQR (Limit of Reporting)
 - Analyte(s) marked * refers not included in scope of Accreditation ISO/IEC 17025.

Technical Management

N. Banphit

Narumon Bandhugit

Supervisor

YINUMINITH 7-323-9-9445

Approved by

D. Chuanphon

Dig Chuanphon

Senior Manager

YINUMINITH 7-323-9-9442

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Signature: J. Banphit (13/10/20)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Sample Number : 2210747-1
Sampled Date : Feb 02, 2022 2:07 PM
Sample Description : Wastewater
Contract ID : L ESIE_OSS_2550 Plot 102 Site : GKM Driveline (Thailand) Ltd
Location : Factory 2
Date Analysis Commenced : Feb 02, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	20	≤500	APHA (2017), §210 B	Rayong
COD	mg/L	1.5	5	109	≤750	APHA (2017), §220 D	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Based on APHA (2017), §520 B	Rayong
pH (on site) *	-	-	-	7.5	5.5-9.0	Based on APHA (2017), §500-H (B)	Rayong
Temperature *	Degree C	-	-	32.0	≤45	Based on APHA (2017), §250 B	Rayong
Total Suspended Solids Dried at 105±0.5 degree C	mg/L	-	5	33	≤200	APHA (2017), §254 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Paramet Sakkyakun

Remark :
* LOD : Limit of Detection
* "C" : Lower than LOQ (Unit of Quantitation) / LOB (Unit of Reporting)
* Analyte(s) marked * below not included in scope of Accreditation ISO/IEC 17025.

Technical Management

N.Bangphit

Narumon Banchoangkit
Supervisor

Approved by

N.Bangphit

Dej Chongchuan
Senior Manager

06532 8555
06532 8555

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Analysis / Test Report

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112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Sample Number : 222521-1
Sampled Date : Mar 02, 2022 2:29 PM
Sample Description : Wastewater
Contract ID : L ESIE_OSS_2550 Plot 102 Site : GKM Driveline (Thailand) Ltd
Location : Factory 2
Date Analysis Commenced : Mar 02, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	100	≤500	APHA (2017), §210 B	Rayong
COD	mg/L	1.5	5	247	≤750	APHA (2017), §220 D	Rayong
Oil & Grease	mg/L	-	3	16	≤10	Based on APHA (2017), §520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Based on APHA (2017), §500-H (B)	Rayong
Temperature *	Degree C	-	-	30.4	≤45	Based on APHA (2017), §250 B	Rayong
Total Suspended Solids Dried at 105±0.5 degree C	mg/L	-	5	59	≤200	APHA (2017), §254 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Pathaya Thonglaeng

Remark :
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* "C" : Lower than LOQ (Unit of Quantitation) / LOB (Unit of Reporting)
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Technical Management

N.Bangphit

Narumon Banchoangkit
Supervisor

Approved by

N.Bangphit

Dej Chongchuan
Senior Manager

06532 8555
06532 8555

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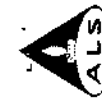
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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140

P/O : Factory / Monthly

Project Name : Factory / Monthly

Project Location : ESIE



TESTING

No.0042

Lot ID: 2249561

Date Received : May 12, 2022

Date Reported : May 19, 2022

Report Number : 2298099-1

Page 1 of 1

Sample Number : 2249561-1

Sample Date : May 12, 2022 10:30 AM

Sample Description : Wastewater

Contract ID : L_ESIE_055_2550 Plot : I-02 Site : GKM DriveIne (Thailand) Ltd.

Location : Factory 2

Date Analysis Commenced : May 12, 2022

Condition of Sample : Collected in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation

Physical Property : Standards (APHA / USEPA)

Block, a lot of odour, solid and turbid

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	2	128	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	272	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	3	17	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	7.0	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	30.5	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	25	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Narumon Banchongit

Remark : LOD : Limit of Detection

* °C : Lower than LOD (Limit of Quantitation) / LOQ (Limit of Reporting)

* Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

Technical Management

N. Banchongit

Narumon Banchongit

Supervisor

WUJUNWANG 1-323-9-9445

Approved by

D. Chongchon

Dej Chongchon

Senior Manager

WUJUNWANG 1-323-9-9442

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48-54 ENGL

EN/Report_JA_G-04 (1/2019)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140

P/O : Random Check

Project Name : ESIE

Project Location : ESIE

Sample Number : 2260207-1

Sample Date : Jun 01, 2022 3:14 PM

Sample Description : Wastewater

Contract ID : L_ESIE_055_2550 Plot : I-02 Site : GKM DriveIne (Thailand) Ltd.

Location : Factory 2

Date Analysis Commenced : Jun 01, 2022

Condition of Sample : Collected in two glass vials, one amber glass bottle and seven plastic bottles. Sample containers comply to pretreatment -

Physical Property : Standards (APHA / USEPA)

Block, a lot of odour, solid and turbid

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	2	248	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	612	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	5	70	≤500	APHA (2017), 5120 F	Rayong
Color (at pH 7.0)	ADMI	5	69	≤500	APHA (2017), 5120 F	Rayong
Cyanide as PPM	mg/L	0.001	0.005	≤0.005	Based on APHA (2017), 4500-CH(C) (C)	Rayong
Formaldehyde	mg/L	0.03	0.1	≤1	Based on APHA (2017), 4500-H (B)	Rayong
Oil & Grease	mg/L	3	45	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	7.2	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Phenol	mg/L	0.005	0.01	≤1	APHA (2017), 5520 D	Rayong
Temperature *	Degree C	-	31.5	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	5	388	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	119	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Thotsak Wongasuchai, Pongpong Maht

Remark : LOD : Limit of Detection

* °C : Lower than LOD (Limit of Quantitation) / LOQ (Limit of Reporting)

* Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

* The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banchongit

Narumon Banchongit

Supervisor

WUJUNWANG 1-323-9-9445

Approved by

D. Chongchon

Dej Chongchon

Senior Manager

WUJUNWANG 1-323-9-9442

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48-54 ENGL

EN/Report_JA_G-04 (1/2019)



Analysis / Test Report

TESTING

No.0042

Lot ID: 2275384

Date Received : Jul 11, 2022

Date Reported : Jul 18, 2022

Report Number : 2350049-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Puaikdaeng, Amphur Puaikdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory 1 Monthly

Project Location : ESIE

Page 1 of 1

Sample Number	2275384-1
Sampled Date	Jul 11, 2022 2:30 PM
Sample Description	Wastewater
Contract ID	L ESIE 055_2550
Location	Factory 2
Date Analysis Commenced	Jul 11, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	24	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.5	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	31.2	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Nontak Itanmasaro

Remark :
- LOD : Limit of Detection
- "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphit

Supervisor

vis.dunuwat 3-223-9445

Approved by

D. Chongchon

Senior Manager

vis.dunuwat 3-223-9442

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Signature: ALS Co., Ltd.



Analysis / Test Report

TESTING

No.0042

Lot ID: 2288255

Date Received : Aug 10, 2022

Date Reported : Aug 16, 2022

Report Number : 2382934-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Puaikdaeng, Amphur Puaikdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory 1 Monthly

Project Location : ESIE

Sample Number	2288255-1
Sampled Date	Aug 10, 2022 3:22 PM
Sample Description	Wastewater
Contract ID	L ESIE 055_2550
Location	Factory 2
Date Analysis Commenced	Aug 10, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	41	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	159	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	31.6	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	28	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Paitonpong Komsawat, Jakkarn Manwiche

Remark :
- LOD : Limit of Detection
- "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management

N. Banphit

Supervisor

vis.dunuwat 3-223-9445

Approved by

D. Chongchon

Senior Manager

vis.dunuwat 3-223-9442

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Signature: ALS Co., Ltd.



Analysis / Test Report

TESTING
No. 0009
Lot ID: 22130358
Date Received : Nov 11, 2017
Date Reported : Nov 17, 2017
Report Number : 2474558-2

Page 1 of 1

Sample Number	22130358-1					Method Location
Sampled Date	Nov 11, 2022 10:00 AM					
Sample Description	Wastewater					
Contract ID	L_25312_055_2550		Plot	I-02	Site	
Location	Factory 2		GKN Driveline (Thailand) Ltd.			
Date Analysis Commenced	Nov 14, 2022					
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment + preservation					
Physical Property	Color: Yellow, a lot of odor, solid and some turbid					
Analyte	Unit	LOD	LOQ	Result	Guideline / Specification	
			(LOE)			

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central

Wastewater Treatment Plant
Sampled By: Paramet Sattayakun, Samart Khumphilee

Remarks:

- LOD : Limit of Detection
- " $<$ " : Lower than LOQ (Limit of Quantitation) / LOD (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by

number.

Deji Chengdon
Senior Manager

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11795 *Staphylinidae*: *Staphylinus* sp. n. (11795)

C:\Program Files\AutoCAD\Autocad.exe



Analysis / Test Report

TESTING
No.0042
Lot ID: 2275285

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, "Amphur Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
Date Reported : Jul 18, 2022
Report Number: 2249833-1

P/O :

Project Name : Factory / Monthly

Project Location: ESIE

Page 1 of 1

Sample Number	2275285-1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Pithaya Thongtaeng

Remark :
- LOD : Limit of Detection
- % : Lower than LOQ (Limit of Reporting)
- Analytical marked * : Not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC : 17025.

Technical Management

N. Banphit

Naturun Banphit
Supervisor

WUQUAN 7-323-9445

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

WUQUAN 7-323-9442

ALS Laboratory Group (Thailand) Co., Ltd.
112 Moo 4, Highway 331 Road, "Amphur Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
Date Reported : Jul 18, 2022
Report Number: 2249833-1

ADDRESS 816/110 Moo 5, T. Maeruan Phu A, Phukdaeng Rayong 21140 Thailand PHONE 08 0 3304 8555 FAX 08 0 3304 8556

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RIGHT SOLUTIONS HIGHLY PRECISE

480 116940

S. Banphit, M. Ch. (C) (2022)



Analysis / Test Report

TESTING
No.0042
Lot ID: 2275284

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, "Amphur Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
Date Reported : Jul 18, 2022
Report Number: 2249832-1

P/O :

Project Name : Factory / Monthly

Project Location: ESIE

Page 1 of 1

Sample Number	2275284-1								
Sample Date	Jul 12, 2022 3:06 PM								
Sample Description	Wastewater								
Contract ID	L-ESIE 078-2551	Plot	P-38	Site	Sumitko Eastern Rubber (Thailand) Ltd				
Date Analysis Commenced	Jul 12, 2022								
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)								
Physical Property	Yellow, a lot of colour, some solid and turbid								
Analyte	Unit	LDP	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location		
Water Testing									
BOD (5 days at 20 Degree C)	mg/L	-	2	21	≤500	APHA (2017), 5210 B	Rayong		
COD	mg/L	1.5	5	66	≤750	APHA (2017), 5210 D	Rayong		
Oil & Grease	mg/L	-	3	4	≤10	Based on APHA (2017), 5220 B	Rayong		
pH (on site) *		-	-	7.3	5.5-9.0	Based on APHA (2017), 4500 H (B)	Rayong		
Temperature *	Degree C	-	-	31.5	≤45	Based on APHA (2017), 2550 B	Rayong		
Total Suspended Solids Dried at	mg/L	-	5	15	≤200	APHA (2017), 2540 D	Rayong		

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Pithaya Thongtaeng

Remark :
- LOD : Limit of Detection
- % : Lower than LOQ (Limit of Reporting)
- Analytical marked * : Not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC : 17025.

Technical Management

N. Banphit

Naturun Banphit
Supervisor

WUQUAN 7-323-9445

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

WUQUAN 7-323-9442

ALS Laboratory Group (Thailand) Co., Ltd.
112 Moo 4, Highway 331 Road, "Amphur Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
Date Reported : Jul 18, 2022
Report Number: 2249832-1

ADDRESS 816/110 Moo 5, T. Maeruan Phu A, Phukdaeng Rayong 21140 Thailand PHONE 08 0 3304 8555 FAX 08 0 3304 8556

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RIGHT SOLUTIONS HIGHLY PRECISE

480 116940

S. Banphit, M. Ch. (C) (2022)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331, Road, Tambol Puakdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory Monthly
Project Location : ESIE

Page 1 of 1



TESTING
No.0042
Lot ID: 2288175

Date Received : Aug 08, 2022
Date Reported : Aug 15, 2022
Report Number: 2282474-1

Sample Number : 2288175-1
Sample Date : Aug 08, 2022 2:30 PM
Sample Description : Wastewater
Contract ID : L ESIE 178 2550 Plot : P-36-36 Site : Sunbiko Eastern Rubber (Thailand) Ltd.
Date Analysis Commenced : Aug 08, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pre-treatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of air, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	*	2	39	≤500	APHA (2017), 510 B	Rayong
COD	mg/L	1.5	5	170	≤750	APHA (2017), 5220 C	Rayong
Oil & Grease	mg/L	*	3	5	≤10	Based on APHA (2017), 5520 D	Rayong
pH (at site) *		*	*	7.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	*	*	31.7	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 Degree C	mg/L	*	5	43	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Paramet Sattayakun

Remark :
- LOD : Limit of Detection
- * : Lower than LOQ (Unit of Quantitation) / LOQ (Unit of Reporting)
- Analytes marked * is not included in scope of Accreditation ISO/IEC 17025
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025

Technical Management

N. Bangkit

Paronchai Bandongkiet
Supervisor

โทรศัพท์ : 076-323 9 3442

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

โทรศัพท์ : 076-323 9 3442

The document is valid only for: "Wastewater Quality Monitoring" only. It is not valid for any other purpose. The validity of this report is based on the information provided by the client. The laboratory is not responsible for any errors or omissions in the report. The laboratory is not responsible for any damages or losses resulting from the use of this report. The laboratory is not responsible for any legal actions or claims resulting from the use of this report.

ALCUTISS 516/10 Moo 5, T. Maenam Klu A. Phukdaeng Rayong, 21140 Thailand. P.O. Box 1155. FAX: +66 0 3204 8556
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0800-111111

0800-111111



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331, Road, Tambol Puakdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory Monthly
Project Location : ESIE

Page 2 of 1



TESTING
No.0042
Lot ID: 2288174

Date Received : Aug 08, 2022
Date Reported : Aug 15, 2022
Report Number: 228472-1

Sample Number : 2288174-1
Sample Date : Aug 08, 2022 2:35 PM
Sample Description : Wastewater
Contract ID : L ESIE 018 2551 Plot : P-38 Site : Sunbiko Eastern Rubber (Thailand) Ltd.
Date Analysis Commenced : Aug 08, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pre-treatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, some odor, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	*	2	≤2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	5	≤750	APHA (2017), 5220 C	Rayong
Oil & Grease	mg/L	*	3	≤1	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		*	*	7.5	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	*	*	31.1	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 Degree C	mg/L	*	5	≤5	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled by : Paramet Sattayakun

Remark :
- LOD : Limit of Detection
- * : Lower than LOQ (Unit of Quantitation) / LOQ (Unit of Reporting)
- Analytes marked * is not included in scope of Accreditation ISO/IEC 17025
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025

Technical Management

N. Bangkit

Paronchai Bandongkiet
Supervisor

โทรศัพท์ : 076-323 9 3442

Approved by

D. Chongchon

Dej Chongchon
Senior Manager

โทรศัพท์ : 076-323 9 3442

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0800-111111

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Analysis / Test Report

TESTING
No. 0042
Lot ID: 22104328
Date Received: Sep 06, 2022
Date Reported: Sep 12, 2022
Report Number: 2415389-1

Client: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
P/O: Factory / Monthly
Project Location: ESIE

Page 1 of 1

Sample Number: 22104328-1
Sample Date: Sep 06, 2022 2:31 PM
Sample Description: Wastewater
Contract ID: L ESIE_178_2550 Plot: P-34-36 Site: Sumitoko Eastern Rubber (Thailand) Ltd.
Date Analysis Commenced: Sep 06, 2022
Condition of Sample: Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA).
Physical Property: Yellow, a lot of odor, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	47	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	145	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.4	5.5-9.0	Based on APHA (2017), 4510-H (B)	Rayong
Temperature *	Degree C	-	-	28.7	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	55	≤600	APHA (2017), 2540 C	Rayong

Guideline: Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560: Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By: Pithaya Thongbeng

Remark:
- LOD: Limit of Detection
- "C": Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- This laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025

Technical Management

Natunon Banchoingkit
Supervisor
หมายเลข 3-321-9-9445

Approved by

Dej Changdon
Senior Manager
หมายเลข 3-321-9-9442

The above results were obtained from the analysis of the sample submitted to the laboratory for analysis. The results are based on the information provided by the client. The laboratory is not responsible for the accuracy of the results if the sample is not properly labeled or if the client has provided incorrect information. The results are for information only and should not be used for legal or regulatory purposes. The laboratory is not responsible for the accuracy of the results if the sample is not properly labeled or if the client has provided incorrect information. The results are for information only and should not be used for legal or regulatory purposes.

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ALS LABORATORY GROUP (THAILAND) CO., LTD. AN ALS LIMITED COMPANY

RIGHT SOLUTIONS THAILAND FACTORY

S. REPORT NO. 2415389-1

08/01/2024



Analysis / Test Report

TESTING
No. 0042
Lot ID: 22104327
Date Received: Sep 06, 2022
Date Reported: Sep 12, 2022
Report Number: 2415388-1

Client: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
P/O: Factory / Monthly
Project Location: ESIE

Page 1 of 1

Sample Number: 22104327-1
Sample Date: Sep 06, 2022 2:40 PM
Sample Description: Wastewater
Contract ID: L ESIE_018_2551 Plot: P-38 Site: Sumitoko Eastern Rubber (Thailand) Ltd.
Date Analysis Commenced: Sep 06, 2022
Condition of Sample: Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA).
Physical Property: Yellow, some odor, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	18	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.4	5.5-9.0	Based on APHA (2017), 4510-H (B)	Rayong
Temperature *	Degree C	-	-	30.8	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 Degree C	mg/L	-	5	<5	≤200	APHA (2017), 2540 C	Rayong

Guideline: Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560: Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By: Pithaya Thongbeng

Remark:
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- "C": Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- This laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025

Technical Management

Natunon Banchoingkit
Supervisor
หมายเลข 3-321-9-9445

Approved by

Dej Changdon
Senior Manager
หมายเลข 3-321-9-9442

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ALS LABORATORY GROUP (THAILAND) CO., LTD. AN ALS LIMITED COMPANY

RIGHT SOLUTIONS THAILAND FACTORY

S. REPORT NO. 2415388-1

08/01/2024



Analysis / Test Report



TESTING
No.0042
Lot ID: 22104585
Date Received : Oct 04, 2022
Date Reported : Oct 10, 2022
Report Number: 2447955-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 311 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory 1 Monthly
Project Location: ESIE

Page 1 of 1

Sample Number		22104585-1					
Sample Date		Oct 04, 2022 2:30 PM					
Sample Description		Wastewater					
Contract ID		Plot	P-34-76				
		Site	Sumitko Eastern Rubber (Thailand) Ltd.				
Date Analysis Commenced		Oct 04, 2022					
Condition of Sample		Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment preservation standards (APHA / USEPA)					
Physical Property		Yellow, a lot of colour, some solid and turbid					
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	*	2	28	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	93	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	*	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.8	5.5-9.0	Based on APHA (2017), 4510-H (F)	Rayong
Temperature *	Degree C	*	*	34.5	≤45	Based on APHA (2017), 2550 G	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	*	5	30	≤200	APHA (2017), 2510 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant.

Sampled By : Tanasit Wongachai

Remarks :
- "L" : Limit of Quantitation / LOR (Limit of Report mg)
- "x" : Lower than LOQ
- Analyte(s) marked * : Value not included in scope of Accreditation ISO/IEC 17025
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Narumon Banthongkiet
Supervisor
ติดต่อเราที่ : 223-9-9445

Approved by

Uel Chingchon
Senior Manager
ติดต่อเราที่ : 223-9-9442

N. Banphit

D. Phum

*We declare that this report complies with the ISO 15189:2013 requirements. The report of analytical results is not to be interpreted as a statement of compliance with any regulatory requirements. The laboratory is not responsible for the use of the results of this report for any purpose other than that for which it was intended. The laboratory is not responsible for the use of the results of this report for any purpose other than that for which it was intended. The laboratory is not responsible for the use of the results of this report for any purpose other than that for which it was intended.

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



Analysis / Test Report



TESTING
No.0042
Lot ID: 22104584
Date Received : Oct 04, 2022
Date Reported : Oct 10, 2022
Report Number: 2447955-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 311 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory 1 Monthly
Project Location: ESIE

Page 1 of 1

Sample Number	22104584-1						
Sample Date	Oct 04, 2022 2:35 PM						
Sample Description	Wastewater						
Contract ID	L ESIE_018_2555	Plot	P-38	Site	Sumitko Eastern Rubber (Thailand) Ltd.		
Date Analysis Commenced	Oct 04, 2022						
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)						
Physical Property	Black, a lot of odour, some solid and turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	*	2	15	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	52	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	*	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.2	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	*	*	30.2	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 Degree C	mg/L	*	5	24	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant.

Sampled By : Tanasit Wongachai

Remarks :
- "L" : Limit of Quantitation / LOR (Limit of Report mg)
- "x" : Lower than LOQ
- Analyte(s) marked * : Value not included in scope of Accreditation ISO/IEC 17025
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

Narumon Banthongkiet
Supervisor
ติดต่อเราที่ : 223-9-9445

Approved by

Uel Chingchon
Senior Manager
ติดต่อเราที่ : 223-9-9442

N. Banphit

D. Phum

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ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory : Monthly
Project Location : ESJF



TESTING
No.0042
Lot ID: 22129988
Date Received : Nov 02, 2022
Date Reported : Nov 08, 2022
Report Number: 2474047-1

Page 1 of 1

Sample Number 22129988-1
Sampled Date Nov 02, 2022 2:30 PM
Sample Description Wastewater
Contract ID L_ESE_176_2550 Plot P-34-36 Site Sumitoku Eastern Rubber (Thailand) Ltd.
Date Analysis Commenced Nov 02, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property *Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOI)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	2	23	45	≤ 500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	45	≤ 750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	3	43	7.8	≤ 10	Based on APHA (2017), 5520 B (3)	Rayong
pH (on site) *				7.8	5.5-9.0	Based on APHA (2017), 4500 H	Rayong
Temperature *	Degree C			35.8	≤ 45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	22		≤ 200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.16, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant
Sampled By : Tanasit Wongchutai

Remark :
LOD : Limit of Detection
LOQ : Lower than LOQ (Limit of Quantitation) / 1.0x (Limit of Reporting)
* : Analyte(s) marked * herein not included in scope of Accreditation ISO/IEC 17025
* : The laboratory has been accredited as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Bangphit
Nattamon Banchongjit
Superior
vst00014617-323-a-9445

Approved by

Dei Changchon
Senior Manager
vst00014617-323-a-9442

The above results are valid only for the analytical data only and do not include the quality of the sample. The client shall ensure that the sample is representative of the process and is not contaminated by any other source.
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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory : Monthly
Project Location : ESJF



TESTING
No.0042
Lot ID: 22129987
Date Received : Nov 02, 2022
Date Reported : Nov 08, 2022
Report Number: 2474046-1

Page 1 of 1

Sample Number 22129987-1
Sampled Date Nov 02, 2022 2:45 PM
Sample Description Wastewater
Contract ID L_ESEF_118_2551 Plot P-38 Site Sumitoku Eastern Rubber (Thailand) Ltd.
Date Analysis Commenced Nov 02, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property *Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOI)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	2	23	9	≤ 500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	9	≤ 750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	3	43	7.8	≤ 10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *				7.8	5.5-9.0	Based on APHA (2017), 4500 H (1)	Rayong
Temperature *	Degree C			36.7	≤ 45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	22	5	≤ 200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.16, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant
Sampled By : Tanasit Wongchutai

Remark :
LOD : Limit of Detection
LOQ : Lower than LOQ (Limit of Quantitation) / 1.0x (Limit of Reporting)
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* : The laboratory has been accredited as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Bangphit
Nattamon Banchongjit
Superior
vst00014617-323-a-9445

Approved by

Dei Changchon
Senior Manager
vst00014617-323-a-9442

The above results are valid only for the analytical data only and do not include the quality of the sample. The client shall ensure that the sample is representative of the process and is not contaminated by any other source.
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ALS LABORATORY GROUP (THAILAND) CO. LTD. An ALS Limited Company



Analysis / Test Report

TESTING
No. 0042
Lot ID: 22140030
Date Received : Dec 02, 2022
Date Reported : Dec 09, 2022
Report Number : 2504362-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory Monthly
Project Location: ESIE

Page 1 of 1

Sample Number	22140030-1						
Sample Date	Dec-02, 2022 9:30 AM						
Sample Description	Wastewater						
Contract ID	L-55W-178-2550	Plot	P-34-36	Site	Sumitiko Eastern Rubber (Thailand) Ltd.		
Date Analysis Commenced	Dec-02, 2022						
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)						
Physical Property	Yellow, a lot of colour, solid and some turbid						
Analyte	Unit	LOQ	Result	LOQ (LOB)	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 degree C)	mg/L	2	29		≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	72	5	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 C	Rayong
Oil & Grease *	mg/L	3	5		≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *			7.9		5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C		31.0		≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	24		≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline: Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled by : T. Manan Wongaschai

Remark :
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphit
Narumon Banchoangkit
Supervisor
Mobile: 09-323 9-9445

Approved by

D. Chingchon
Dej Chingchon
Senior Manager
Mobile: 09-323 9-9442

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Analysis / Test Report

TESTING
No. 0042
Lot ID: 22140029
Date Received : Dec 07, 2022
Date Reported : Dec 09, 2022
Report Number : 2504361-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory Monthly
Project Location: ESIE

Page 1 of 1

Sample Number		22140029-1					
Sample Date		Dec 02, 2022 9:35 AM					
Sample Description		Wastewater					
Contract ID	L-EST-018-2551	Plot	P-38	Site	Sumitiko Eastern Rubber (Thailand) Ltd.		
Date Analysis Commenced		Dec 02, 2022					
Condition of Sample		Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)					
Physical Property		Yellow, a lot of colour, solid and some turbid					
Analyte	Unit	LOD	LOQ (LOI)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	*	2	19	≤500	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	112	≤750	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	*	3	6	≤10	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		*		7.7	5.5-9.0	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	*	*	30.8	≤45	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	*	5	24	≤200	Standard Methods for the Examination of Water and Wastewater: APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline: Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled by : T. Manan Wongaschai

Remark :
- LOD : Limit of Detection
- "C" : Lower than LOQ (Limit of Quantification) / LOQ (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

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Approved by

D. Chingchon
Dej Chingchon
Senior Manager
Mobile: 09-323 9-9442

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location : ESIE

TESTING
No.0042

Lot ID: 2275404

Date Received : Jul 07, 2022

Date Reported : Jul 14, 2022

Report Number : 2350456-1

Page 1 of 1

Sample Number 2275404-1
Sampled Date Jul 07, 2022 11:06 AM
Sample Description Wastewater
Contract ID L ESIE 008_2552
Plot I-428
Site ALCAMI INDUSTRIES (THAILAND) CO.,LTD.
Date Analysis Commenced Jul 07, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	50	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	170	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	8	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	31.0	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	45	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pittaya Thongdaeng

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management

N. Banphit

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Dej Chanchon
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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location : ESIE

TESTING
No.0042

Lot ID: 2288320

Date Received : Aug 05, 2022

Date Reported : Aug 11, 2022

Report Number : 2383438-1

Page 1 of 1

Sample Number 2288320-1
Sampled Date Aug 05, 2022 10:38 AM
Sample Description Wastewater
Contract ID L ESIE 008_2552
Plot I-428
Site ALCAMI INDUSTRIES (THAILAND) CO.,LTD.
Date Analysis Commenced Aug 05, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some odour, a lot of solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	19	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	86	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.0	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	32	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Pittaya Thongdaeng

Remark :
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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location : ESTE



TESTING

No.0042

Lot ID: 22104474

Date Received : Sep 05, 2022

Date Reported : Sep 12, 2022

Report Number : 2416398-1

Page 1 of 1

Sample Number 22104474-1

Sampled Date Sep 05, 2022 11:05 AM

Sample Description Wastewater

Contract ID L_ESTE_008_2552

Plot 1-428

Site ALCAMI INDUSTRIES (THAILAND) CO., LTD.

Date Analysis Commenced Sep 05, 2022

Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)

Physical Property Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	31	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	72	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.7	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	28	≤500	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Paratatt Sattayadum

Remark :

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Technical Management

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory / Monthly

Project Location : ESTE



TESTING

No.0042

Lot ID: 22118946

Date Received : Oct 07, 2022

Date Reported : Oct 13, 2022

Report Number : 2448563-1

Page 1 of 1

Sample Number 22118946-1

Sampled Date Oct 07, 2022 11:25 AM

Sample Description Wastewater

Contract ID L_ESTE_008_2552

Plot 1-428

Site ALCAMI INDUSTRIES (THAILAND) CO., LTD.

Date Analysis Commenced Oct 07, 2022

Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)

Physical Property Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	39	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	138	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	9	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.9	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.1	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	37	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongachai

Remark :

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Technical Management

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Approved by

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Dej Chongchon

Senior Manager

WUJUMUWAT 3-323-a-9442

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Analysis / Test Report

TESTING
No.0042
Lot ID: 22130154
Date Received : Nov 04, 2022
Date Reported : Nov 11, 2022
Report Number : 2475003-1

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Sample Number : 22130154-1
Sample Date : Nov 04, 2022 10:50 AM
Sample Description : Wastewater
Contract ID : L ESIE 008_2552
Site : ALCAVI INDUSTRIES (THAILAND) CO., LTD.
Date Analysis Commenced : Nov 04, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOQ)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	41	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	129	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	31.1	≤45	Based on APHA (2017), 2590 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	41	≤500	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant
Sampled By : Tansak Wongachai

Remark :
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Technical Management

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Analysis / Test Report

TESTING
No.0042
Lot ID: 22140175
Date Received : Dec 02, 2022
Date Reported : Dec 10, 2022
Report Number : 250460-1

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Sample Number : 22140175-1
Sample Date : Dec 02, 2022 1:33 PM
Sample Description : Wastewater
Contract ID : L ESIE 008_2552
Site : ALCAVI INDUSTRIES (THAILAND) CO., LTD.
Date Analysis Commenced : Dec 02, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOQ)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	57	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	134	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	7	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Temperature *	Degree C	-	-	31.0	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2590 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	30	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant
Sampled By : Pittaya Thongdaeng

Remark :
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Technical Management

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D.Amnu

Dei Changchon
Senior Manager

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Analysis / Test Report

TESTING
No.0042
Lot ID: 22140228
Date Received : Dec 03, 2022
Date Reported : Dec 10, 2022
Report Number: 2475651-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluekdaeng, Amphur Pluekdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory 1 Monthly
Project Location: ESE

Page 1 of 1

Sample Number 22140228-1
Sampled Date Dec 03, 2022 11:14 AM
Sample Description Wastewater
Contract ID L_ESE_010_2564 Plot PY.03 Site Automatic Enterprise (Thailand) Co., Ltd.
Date Analysis Commenced Dec 03, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of colour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	19	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	45	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *	-	-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	31.9	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	11	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, 8.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Tanat Wongpaichai

Remark :
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- "C" : Lower than LOQ (Limit of Quantitation) / LOB (Limit of Reporting)
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- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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Analysis / Test Report

TESTING
No.0042
Lot ID: 22130230
Date Received : Nov 04, 2022
Date Reported : Nov 11, 2022
Report Number: 2475651-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluekdaeng, Amphur Pluekdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory 1 Monthly
Project Location: ESE

Page 1 of 1

Sample Number 22130230-1
Sampled Date Nov 04, 2022 3:05 PM
Sample Description Wastewater
Contract ID L_ESE_010_2564 Plot PY.03 Site Automatic Enterprise (Thailand) Co., Ltd.
Date Analysis Commenced Nov 04, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, some colour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	24	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	52	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease *	mg/L	-	3	43	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	8.0	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	33.3	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	16	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, 8.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Parameet Sattayakun

Remark :
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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location: ESIE

TESTING
No.0042
Lot ID: 22118734
Date Received : Oct 03, 2022
Date Reported : Oct 10, 2022
Report Number: 2447944-1

Page 1 of 1

Sample Number	22118734-1						
Sampled Date	Oct 03, 2022 11:25 AM						
Sample Description	Wastewater						
Contract ID	L-ESIE_010_2564	Plot	PT.03	Site	Automatic Enterprise (Thailand) Co., Ltd.		
Data Analysis Commenced Oct 03, 2022							
Contained in two glass vials, one amber glass bottle and six plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)							
Yellow, some odour, solid and no turbid							
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	3	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	32	≤750	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMT	-	5	38	≤600	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMT	-	5	35	≤600	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	0.005	Not Detected	≤0.2	Based on APHA (2017), 4500-CN(C), (E)	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.4	5.5-9.0	Based on APHA (2017), 4500-H (F)	Rayong
Phenol	mg/L	0.005	0.01	Not Detected	≤1	APHA (2017), 5530 D	Rayong
Temperature *	Degree C	-	-	29.8	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	256	≤3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	8	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongachai, Thanasoun Namalunna

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Analysis / Test Report

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112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140

P/O :
Project Name : Random Check
Project Location: ESIE

TESTING
No.0009
Lot ID: 22118734
Date Received : Oct 03, 2022
Date Reported : Oct 10, 2022
Report Number: 2447944-2

Page 1 of 1

Sample Number	22118734-1						
Sampled Date	Oct 03, 2022 11:25 AM						
Sample Description	Wastewater						
Contract ID	L-ESIE_010_2564	Plot	PT.03	Site	Automatic Enterprise (Thailand) Co.,Ltd.		
Data Analysis Commenced Oct 04, 2022							
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.001	≤0.25	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.0003	0.0005	0.09	≤1.0	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.0003	0.0005	0.003	≤2.0	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	<0.01	≤0.25	Based on APHA (2017), 3500-Cr (6)	Bangkok
Lead	mg/L	0.0003	0.0005	0.0007	≤0.2	Based on APHA (2017), 3125	Bangkok
Manganese	mg/L	0.0003	0.0005	0.19	≤5.0	Based on APHA (2017), 3125	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Based on APHA (2017), 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.005	≤1.0	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	≤0.02	Based on APHA (2017), 3125	Bangkok
Trivalent Chromium *	mg/L	-	0.01	<0.01	≤0.75	Based on APHA (2017), Calculated	Bangkok
Zinc	mg/L	0.003	0.005	0.07	≤5.0	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanasit Wongachai, Thanasoun Namalunna

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Technical Management

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Analysis / Test Report

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Thailand 21140
P/O :
Project Name : Random Check
Project Location: ESIE

Page 1 of 1

Sample Number 22118734-1
Sampled Date Oct 03, 2022 11:25 AM
Sample Description Wastewater
Contract ID L-ESIE-010-2564 Plot PY.03 Site Automatic Enterprise (Thailand) Co., Ltd.
Date Analysis Commenced Oct 04, 2022
Condition of Sample Contained in two glass vials, one amber glass bottle and six plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / ISO/IEC)
Physical Property Yellow, some odor, solid and no turbid

Analyte	Unit	LOD	LOQ (LOE)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
(a) Iron	mg/L	0.003	0.005	0.59	≤10.0	Based on APHA (2017), 3125	Bangkok
Water Testing							
Fluoride	mg/L	0.05	0.2	<0.2	≤5	APHA (2017), 4500-F(C)	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Tanast Wongachai, Thaisouk Namsakuma

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Analysis / Test Report

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Thailand 21140
P/O :
Project Name : Factory 1 Monthly
Project Location: ESIE

Page 1 of 1

Sample Number 22104525-1
Sampled Date Sep 02, 2022 2:33 PM
Sample Description Wastewater
Contract ID L-ESIE-010-2564 Plot PY.03 Site Automatic Enterprise (Thailand) Co., Ltd.
Date Analysis Commenced Sep 02, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / ISO/IEC)
Physical Property Yellow, a lot of odor, some solid and turbid


Analyte	Unit	LOD	LOQ (LOE)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	22	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	31.0	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	17	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Pittaya Thonglaeng

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Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location: ESIE
TESTING
No.0042
Lot ID: 2288374
Date Received : Aug 10, 2022
Date Reported : Aug 16, 2022
Report Number : 2282792-1

Page 1 of 1

Sample Number	2288374-1
Sample Date	Aug 10, 2022 9:52 AM
Sample Description	Wastewater
Contract ID	L-ESIE_010_2564
Plant	PR.03
Site	Automatic Enterprise (Thailand) Co., Ltd.
Date Analysis Commenced	Aug 10, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	7	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	37	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	6.6	5.5-9.0	Based on APHA (2017), 8004 H (B)	Rayong
Temperature *	Degree C	-	-	30.0	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 105-105 degree C	mg/L	-	5	20	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Pichonpong Komswat

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Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location: ESIE
TESTING
No.0042
Lot ID: 2275504
Date Received : Jul 11, 2022
Date Reported : Jul 18, 2022
Report Number : 2251495-1

Page 1 of 1

Sample Number	2275504-1
Sample Date	Jul 11, 2022 9:25 AM
Sample Description	Wastewater
Contract ID	L-ESIE_010_2564
Plant	PR.03
Site	Automatic Enterprise (Thailand) Co., Ltd.
Date Analysis Commenced	Jul 11, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	<2	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	18	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	6.5	5.5-9.0	Based on APHA (2017), 8004 H (B)	Rayong
Temperature *	Degree C	-	-	30.3	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 105-105 degree C	mg/L	-	5	15	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Narumon Banphongkhit

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P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 1 of 1

Sample Number	2259774-1
Sampled Date	Jun 07, 2022 3:40 PM
Sample Description	Wastewater
Contract ID	L-ESIE-D10-2564
Plot	PY.03
Site	Automatic Envelopes (Thailand) Co., Ltd.
Date Analysis Commenced	Jun 07, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	7	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	44	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	8.6	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	32.0	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	15	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristics from factory discharge to central wastewater Treatment Plant
Sampled By : Chaiusorn Lerthairatkhulchai

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Analysis / Test Report

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Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 1 of 1

Sample Number	2249517-1
Sampled Date	May 11, 2022 10:28 AM
Sample Description	Wastewater
Contract ID	L-ESIE-909-2552
Plot	L-03.04
Site	Auto Interior Products Co., Ltd
Date Analysis Commenced	May 11, 2022
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOB)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	104	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	302	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	10	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.5	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.8	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	108	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristics from factory discharge to central wastewater Treatment Plant
Sampled By : Pittaya Thongjaeng

Remark :
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Approved by : D. Chongchon
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Analysis / Test Report

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Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

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TESTING
No.0042
Lot ID: 22104559

Date Received : Oct 05, 2022
Date Reported : Oct 11, 2022
Report Number : 2482923-1

Page 1 of 1

Sample Number: 22104559-1
Sample Date: Oct 05, 2022 1:55 PM
Sample Description: Wastewater
Contract ID: L ESIE-041-550
Date Analysis Commenced: Oct 05, 2022
Condition of Sample: Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation
Physical Property: Standards (APHA / USFPA)
Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							Rayong
BOD (5 days at 20 Degree C)	mg/L	-	2	30	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	71	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	2	7	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	31	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central Wastewater Treatment Plant

Sampled By : Thirakorn Wongsachai

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Technical Management: N. Bongsatit
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112/005 616/10 Moo 5 T. Maenam Kh. A. Phakdaeng Rayong 21140 Thailand TEL: 091 466 0 3304 8553 FAX: 466 0 3304 8156
ALS LABORATORY GROUP (THAILAND) CO., LTD. (INCORPORATED IN THAILAND)
112/005 616/10 Moo 5 T. Maenam Kh. A. Phakdaeng Rayong 21140 Thailand TEL: 091 466 0 3304 8553 FAX: 466 0 3304 8156
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112/005 616/10 Moo 5 T. Maenam Kh. A. Phakdaeng Rayong 21140 Thailand TEL: 091 466 0 3304 8553 FAX: 466 0 3304 8156



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 1 of 1

Sample Number: 22100094-1
Sample Date: Dec 30, 2022 10:55 AM
Sample Description: Wastewater
Contract ID: L ESIE-041-2550
Date Analysis Commenced: Dec 06, 2022
Condition of Sample: Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation
Physical Property: Standards (APHA / USFPA)
Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							Rayong
BOD (5 days at 20 Degree C)	mg/L	-	2	43	≤500	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	120	≤750	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2017, part 4500 H (B)	Rayong
Temperature *	Degree C	-	-	29.6	≤45	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2017, part 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	13	≤200	Standard Methods for the Examination of Water and Wastewater, 19th ed., 2017, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central Wastewater Treatment Plant

Sampled By : Thirakorn Wongsachai

Remark :
- LOD : Limit of Detection
- <L : Lower than LOQ (Limit of Quantitation) / LOQ (Limit of Reporting)
- Analytical marked * : Value not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025

Technical Management: N. Bongsatit
Approved by: D. Khamdu
Dej Chaiyachon
Senior Manager
Vat.Dulakorn 3-323-n-9442
www.abglobal.com

ABGLOBAL (THAI) GROUP CO., LTD. (INCORPORATED IN THAILAND)
112/005 616/10 Moo 5 T. Maenam Kh. A. Phakdaeng Rayong 21140 Thailand TEL: 091 466 0 3304 8553 FAX: 466 0 3304 8156
ALS LABORATORY GROUP (THAILAND) CO., LTD. (INCORPORATED IN THAILAND)
112/005 616/10 Moo 5 T. Maenam Kh. A. Phakdaeng Rayong 21140 Thailand TEL: 091 466 0 3304 8553 FAX: 466 0 3304 8156



ALS Laboratory Group (Thailand) Co., Ltd.
104 Phatthanabon 40, Phatthanabon Rd.,
Khwang Phatthanabon, Bang Khen, Bangkok 10250, Thailand
T: +66 2 760 3000



ALS Laboratory Group (Thailand) Co., Ltd.
104 Phatthanabon 40, Phatthanabon Rd.,
Khwang Phatthanabon, Bang Khen, Bangkok 10250, Thailand
T: +66 2 760 3000

Notice of Sample Receipt

Lot 22118927

To: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
Lot. (208)
777 Moo 13 WHA TOWER, 23rd - 25th Floor,
Debaratna Road (Bangna-Truck) KM.7, Bang Kaeo,
Bang Pli, Samut Prakan Thailand 10540
Agreement ID : 480-S1
Quotation ID : Q215244
Received Date : 04-Nov-2022
Completion Date : 04-Nov-2022
Project Name : Factory / Monthly
Project Location : ESIE
Credit

From: To: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd. (208)
K. Sanong Changnil
112 Moo 4, Highway 331 Road, Tambol
Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
Rec. (key in) System) /
PO / IN :
Project Name : Factory / Monthly
Project Location : ESIE
Credit

Sample Information		Service Name		Types	
Sample ID	: 22118927-1	1. BOD (R)		350.00	
Sampling Date/Time	: 04-Nov-2022 10:43	2. COD (R)		250.00	
Sample Name	: Wastewater	3. DOF (R)		400.00	
Sample Location		4. pH at 25 (on site) (R)		50.00	
Sample ID	: L ESIE_041_2550	5. Temperature (R)		100.00	
Sampling by	: PRT: HANA	6. TSS (R)		150.00	
Project	: S21				
Sampling Site	: EREC (Thailand) Co., Ltd.				
Contract Person	: Apunthorn Indrathit (equity) 0916789013				
Sample Condition	: Contained in one amber glass bottle and three plastic bottles. Sample containers comply to preservation - preservation standards (APHA / USEPA)				
Property	: Yellow, a lot of colour, some solid and turbid				

Total Service Fee	1,300.00	Baht
Discount	390.00	Baht
Net	910.00	Baht
Vat 7%	63.70	Baht
Grand Total	973.70	Baht



ALS Laboratory Group (Thailand) Co., Ltd.
104 Phatthanabon 40, Phatthanabon Rd.,
Khwang Phatthanabon, Bang Khen, Bangkok 10250, Thailand
T: +66 2 760 3000

Notice of Sample Receipt

Lot 22104559

To: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd. (208)
777 Moo 13 WHA TOWER, 23rd - 25th Floor,
Debaratna Road (Bangna-Truck) KM.7, Bang Kaeo,
Bang Pli, Samut Prakan Thailand 10540
Agreement ID : 480-S1
Quotation ID : Q215244
Received Date : 05-Oct-2022
Completion Date : 05-Oct-2022
Project Name : Factory / Monthly
Project Location : ESIE
Credit

From: To: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd. (208)
K. Sanong Changnil
112 Moo 4, Highway 331 Road, Tambol
Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
Rec. (key in) System) /
PO / IN :
Project Name : Factory / Monthly
Project Location : ESIE
Credit

Sample Information		Service Name		Types	
Sample ID	: 22104559-1	1. BOD (R)		350.00	
Sampling Date/Time	: 05-Oct-2022 13:35	2. COD (R)		250.00	
Sample Name	: Wastewater	3. DOF (R)		400.00	
Sample Location		4. pH at 25 (on site) (R)		50.00	
Contract ID	: L ESIE_041_2550	5. Temperature (R)		100.00	
Sampling by	: TANASITW	6. TSS (R)		150.00	
Project	: S21				
Sampling Site	: EREC (Thailand) Co., Ltd.				
Contract Person	: Apunthorn Indrathit (equity) 097-176-6661 / equity 0918789013				
Sample Condition	: Contained in one amber glass bottle and three plastic bottles. Sample containers comply to preservation - preservation standards (APHA / USEPA)				
Property	: Yellow, some odour, solid and turbid				

Total Service Fee	1,300.00	Baht
Discount	390.00	Baht
Net	910.00	Baht
Vat 7%	63.70	Baht
Grand Total	973.70	Baht



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number : 2288149-1
Sampled Date : Aug 05, 2022 10:31 AM
Sample Description : Wastewater
Contract ID : L ESIE 041_2350 Plot S-21 Site ESIE (Thailand) Co., Ltd.
Date Analysis Commenced : Aug 05, 2022
Condition of Sample : Confined in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification	Method	Testing Location
Water Testing							Rayong
BOD (5 days at 20 Degree C)	mg/L	2	18		≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	57	<750	APHA (2017), 5270 D	Rayong
Oil & Grease	mg/L	3	5		≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *				7.8	5.5-9.0	Based on APHA (2017), 4520 H (E)	Rayong
Temperature *	Degree C			30.7	≤15	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	15		≤500	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Activity of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to canal.
wastewater Treatment Plant
Sampled by : Tanasit Wongsachol

Remarks :
- LOD : Limit of Detection
- "u" : Lower than LOQ (Limit of Quantitation) / LOQ (Limit of Reporting)
- Analysis method : Have not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory comply with the ISO/IEC 17025.

Technical Management

Approved by

Supervisor

Dej Chongkarn

Supervisor

Yongchaiwong 3-023-m-9442

Yongchaiwong 3-023-m-9442

This report, unless stated otherwise, is prepared and issued only for the client's use and is not to be used for any other purpose without the written consent of the Laboratory. ALS Laboratory Group (Thailand) Co., Ltd. is not responsible for the accuracy of the results if the sample is not properly preserved and handled according to the Laboratory's standard operating procedures (SOPs).
AIRTEL: 081-010-0000 Fax: 081-010-0001
ALS Laboratory Group (Thailand) Co., Ltd. 112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong 21140 Thailand. TEL: 081-010-0000 FAX: 081-010-0001
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4610/0200

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Notice of Sample Receipt

Lot 2288149

2288149-1 ESIE (Thailand) Co., Ltd. Loc

Project No.

Eastern Seaboard Industrial Estate (Rayong) Co., Ltd. (208)
K. Sanying Chongnail
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong Thailand 21140
Rec. (key in) System

Project Name

Factory / Monthly
ESIE

Project Location

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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Plukdaeng, Amphur Plukdaeng, Rayong Thailand 21140

P/O :
Project Name : Factory 1 Monthly
Project Location : ESIE

TESTING
No.0042
Lot ID: 2275259
Date Received : Jul 07, 2022
Date Reported : Jul 14, 2022
Report Number: 22959774

Page 1 of 1

Sample Number		2275259-1			
Sampled Date		Jul 07, 2022 10:39 AM			
Sample Description		Wastewater			
Contract ID		L ESIE 041 2550		Plot 5-21	
Date Analysis Commenced		Jul 07, 2022		Site	
Condition of Sample		Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)		Site	
Physical Property		Yellow, a lot of colour, some solid and turbid		Site	
Analysis	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification
Water Testing					
BOD (5 days at 20 Degree C)	mg/L	-	2	49	APHA (2017), 5210 B
COD	mg/L	1.5	5	156	APHA (2017), 5220 C
Oil & Grease	mg/L	-	3	4	Based on APHA (2017), 5520 B
pH (on site) *	-	-	-	7.9	Based on APHA (2017), 4500-H (B)
Temperature *	Degrees C	-	-	31.2	Based on APHA (2017), 2550 B
Total Suspended Solids Dried at 105-105 Degreed C	mg/L	-	5	24	APHA (2017), 2540 D

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Tanaset Wongachai

Remarks :
* Limit of Detection
* LOD : Limit of Detection
* LOQ : Limit of Quantitation (LOQ) (Limit of Reporting)
* Analytical method is not included in scope of Accreditation ISO/IEC 17025.
* The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphat

Approved by

D. Chingchon

Senior Manager

Supervisor

W. Chingchon

Senior Manager

The above results are valid only for the purpose stated and are not to be used for any other purpose without the prior written consent of ALS.

AGREES BY: T. Manom Kiat A. Plukdaeng Rayong 21140 Thailand PHONE +66 0 3104 8155 FAX +66 0 3104 8156

ALS LABORATORY GROUP (THAILAND) CO., LTD. An ALS Limited Company

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RIGHT SOLUTIONS

48-251 (2004)

5, Saphan, A1 Cl (p) 112798



Notice of Sample Receipt

Lot 2275259

2275259-1, g10x (Thailand) Co., Ltd., Loc

Client:

Eastern Seaboard Industrial Estate (Rayong) Co., Ltd. (2018)

K. Sanong Changnill

112 Moo 4, Highway 331 Road, Tambol Plukdaeng, Amphur Plukdaeng, Rayong Thailand 21140

Rec. (Way in) System

PO IN :

Project Name

Factory 1 Monthly

Project Location

ESIE

Sample Information

Sample ID

2275259-1

Sampling Date/Time

07-Jul-2022 10:50

Sample Name

Wastewater

Sample Location

Plot 5-21

Contract ID

L ESIE 041 2550

Sampling by

TANASETY

Plot

5-21

Sampling Site

ESIE (Thailand) Co., Ltd.

Contract Person

Phatthana Wattana 097-176-6661 / 0918789013

Sample Condition

Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)

Property

Yellow, a lot of colour, some solid and turbid

Total Service Fee

1,300.00

Discount

390.00

Net

910.00

Var 7%

63.70

Grand Total

973.70

Boht

1,300.00

Boht

390.00

Boht

910.00

Boht

63.70

Boht

973.70

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Credit

5

RJGE / PM

S. Saphan, A1 Cl (p) 112798

Page 24 of 258

Printed Date: Jul 18, 2022 (12:53:11 pm)



TESTING
No.0042

Lot ID: 2234966

Date Received : Apr 04, 2022
Date Reported : Apr 11, 2022
Report Number : 2266384-1

Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Phrakdaeng, Amphur Phrakdaeng, Rayong
Thailand 21140

P/O : Project Name : Factory / Monthly

Project Location: ESII

Page 1 of 1

Sample Number	2234966-1						
Sampled Date	Apr 04, 2022 2:18 PM						
Sample Description	Wastewater						
Contract ID	LESIE_041_2750	Plot	S-21	Site	Eftec (Thailand) Co., Ltd.		
Date Analysis Commenced	Apr 04, 2022						
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / US EPA)						
Physical Property	Yellow, a lot of colour, some solid and turbid						
Analyte	Unit	LOD	LOQ (LOE)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	37	≤500	APHA (2017), 5210 A	Rayong
COO	mg/L	1.5	5	92	≤750	APHA (2017), 520 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤50	Used on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.3	5.5-9.0	Based on APHA (2017), 4500-H (9)	Rayong
Temperature *	Degree C	-	-	31.0	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 Degree C	mg/L	-	5	16	≤720	APHA (2017), 2540 C	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No. 76, B.F. 2560 : Criteria of wastewater characteristics from factory discharge to central wastewater Treatment Plant

Sampled By : Pithaya Thongdaeng

Remark :
- LOD : Limit of Detection
- °C : Lower than LOD (Limit of Quantitation) / LQR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accredited ISO/IEC 17025.

Approved by

Dr. Chongchai

Senior Manager

Watanaoat 1-323-49412

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Watanaoat 1-323-49412

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Watanaoat 1-323-49412



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Phrakdaeng, Amphur Phrakdaeng, Rayong
Thailand 21140

P/O : Project Name : Random Check

Project Location: FSIE

Page 1 of 1

Sample Number		2210632-1					
Sampled Date		Feb 09, 2022 10:15 AM					
Sample Description		Wastewater					
Contract ID		LESIE_041_2550					
Plot		S-21					
Site		Eftec (Thailand) Co., Ltd.					
Date Analysis Commenced		Feb 09, 2022					
Condition of Sample		Contained in two glass vials, one amber glass bottle and seven plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)					
Physical Property		Yellow, a lot of colour, some solid, and turbid					
Analyte	Unit	LOD	LOQ (LOE)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	125	≤500	APHA (2017), 5210 A	Rayong
COO	mg/L	1.5	5	312	≤750	APHA (2017), 520 D	Rayong
Color (at Original µl)	APMT	-	5	170	≤500	APHA (2017), 220 F	Rayong
Color (at pH 7.0)	APMT	-	5	167	≤500	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	0.005	0.006	≤0.2	Based on APHA (2017), 4500-HCN, (C)	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	3	8	≤10	Based on APHA (2017), 2550 B	Rayong
pH (on site) *	-	-	-	7.6	5.5-9.0	Based on APHA (2017), 4500 H (9)	Rayong
Phenol	mg/L	0.005	0.01	0.132	≤1	APHA (2017), 5510 D	Rayong
Temperature *	Degree C	-	-	29.9	≤15	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 °C	mg/L	-	5	340	<3000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 Degree C	mg/L	-	5	60	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No. 76, B.F. 2560 : Criteria of wastewater characteristics from factory discharge to central wastewater Treatment Plant

Sampled By : Pithaya Thongdaeng

Remark :
- LOD : Limit of Detection
- °C : Lower than LOD (Limit of Quantitation) / LQR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accredited ISO/IEC 17025.

Technical Management

Approved by

Dr. Chongchai

Senior Manager

Watanaoat 1-323-49412

Watanaoat 1-323-49412

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ALS Laboratory Group (Thailand) Co., Ltd.
104 Phatcharakarn Rd., Phatcharakarn Bldg.,
Klongkum, Bangkok 10110, Thailand
Tel: +66 2 760 3600

Notice of Sample Receipt

Lot 21150419

Client: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd. (208)
Project Name: 21150419-1
Project Location: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd. (208)
K. Sanong Changsil
112 Moo 4, Highway 331 Road, Tambol
Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
Rec. (key in / system)
PO IN :
Project Name
Project Location
LSE

Quotation ID: Q215244
Received Date: 05-Jan-2022
Application Date: 12-Jan-2022
Sample ID: 21150419-1
Sampling Date/Time: 05-Jan-2022 11:10
Sample Name: Wastewater
Sample Location: L, ESSE 041, 2550
Sampling by: PATTUMWONGK
Plnt: S-21
Sampling Site: Effec (Thailand) Co., Ltd.
Contract Person: 0918/89013
Sample Condition: Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA).
Preservation: Yellow, a lot of colour, some solid and turbid

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						
DO (5 days at 20 Degree C)	mg/L	2	56	≥500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	122	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	3	4	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	7.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	28.1	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	22	≤200	APHA (2017), 2540 D	Rayong

Guideline: Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560. Criteria of wastewater characteristics from factory discharge to central wastewater treatment plant.
Sampled By: Pattumpong Kommasat
Remarks:
- LOD: Limit of Detection
- L₉₀: Lower than LOD (Limit of Quantitation) / LCR (Limit of Reporting)
- Analysis marked * refers not included in scope of Accreditation ISO/IEC 17025.

Total Service Fee	1,300.00	Baht
Discount	390.00	Baht
Net	910.00	Baht
Vat 7%	63.70	Baht
Gross Total	973.70	Baht

Right Solutions (Thailand) Co., Ltd.
104 Phatcharakarn Rd., Phatcharakarn Bldg.,
Klongkum, Bangkok 10110, Thailand
Tel: +66 2 760 3600

Client: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd. (208)
Project Name: 21150419-1
Project Location: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd. (208)
K. Sanong Changsil
112 Moo 4, Highway 331 Road, Tambol
Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
Rec. (key in / system)
PO IN :
Project Name
Project Location
LSE

Quotation ID: Q215244
Received Date: 05-Jan-2022
Application Date: 12-Jan-2022
Sample ID: 21150419-1
Sampling Date/Time: 05-Jan-2022 11:10
Sample Name: Wastewater
Sample Location: L, ESSE 041, 2550
Sampling by: PATTUMWONGK
Plnt: S-21
Sampling Site: Effec (Thailand) Co., Ltd.
Contract Person: 0918/89013
Sample Condition: Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA).
Preservation: Yellow, a lot of colour, some solid and turbid

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						
DO (5 days at 20 Degree C)	mg/L	2	56	≥500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	122	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	3	4	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	7.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	28.1	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	22	≤200	APHA (2017), 2540 D	Rayong

Right Solutions (Thailand) Co., Ltd.
104 Phatcharakarn Rd., Phatcharakarn Bldg.,
Klongkum, Bangkok 10110, Thailand
Tel: +66 2 760 3600



Analysis / Test Report

Client: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
Project Name: 21150419-1
Project Location: LSE
P/O :
Project Name: Factory Monthly
Project Location: LSE

Sample Number: 21150419-1
Sample Date: Jan 05, 2022 11:10 AM
Sample Description: Wastewater
Contract ID: L, ESSE 041, 2550
Plnt: S-21
Site: Effec (Thailand) Co., Ltd.
Date Analysis Commenced: Jan 05, 2022
Condition of Sample: Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA).
Physical Property: Yellow, a lot of colour, some solid and turbid

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						
DO (5 days at 20 Degree C)	mg/L	2	56	≥500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	122	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	3	4	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	7.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	28.1	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	22	≤200	APHA (2017), 2540 D	Rayong

Guideline: Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560. Criteria of wastewater characteristics from factory discharge to central wastewater treatment plant.
Sampled By: Pattumpong Kommasat
Remarks:
- LOD: Limit of Detection
- L₉₀: Lower than LOD (Limit of Quantitation) / LCR (Limit of Reporting)
- Analysis marked * refers not included in scope of Accreditation ISO/IEC 17025.

Total Service Fee	1,300.00	Baht
Discount	390.00	Baht
Net	910.00	Baht
Vat 7%	63.70	Baht
Gross Total	973.70	Baht

Right Solutions (Thailand) Co., Ltd.
104 Phatcharakarn Rd., Phatcharakarn Bldg.,
Klongkum, Bangkok 10110, Thailand
Tel: +66 2 760 3600

Client: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd. (208)
Project Name: 21150419-1
Project Location: Eastern Seaboard Industrial Estate (Rayong) Co., Ltd. (208)
K. Sanong Changsil
112 Moo 4, Highway 331 Road, Tambol
Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
Rec. (key in / system)
PO IN :
Project Name
Project Location
LSE

Quotation ID: Q215244
Received Date: 05-Jan-2022
Application Date: 12-Jan-2022
Sample ID: 21150419-1
Sampling Date/Time: 05-Jan-2022 11:10
Sample Name: Wastewater
Sample Location: L, ESSE 041, 2550
Sampling by: PATTUMWONGK
Plnt: S-21
Sampling Site: Effec (Thailand) Co., Ltd.
Contract Person: 0918/89013
Sample Condition: Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA).
Preservation: Yellow, a lot of colour, some solid and turbid

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						
DO (5 days at 20 Degree C)	mg/L	2	56	≥500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	122	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	3	4	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	7.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	28.1	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	22	≤200	APHA (2017), 2540 D	Rayong

Right Solutions (Thailand) Co., Ltd.
104 Phatcharakarn Rd., Phatcharakarn Bldg.,
Klongkum, Bangkok 10110, Thailand
Tel: +66 2 760 3600



Analysis / Test Report

TESTING
No.0042
Lot ID: 21150446

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
Date Received : Jan 10, 2022
Date Reported : Jan 17, 2022
Report Number : 2187791-1

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 1 of 1

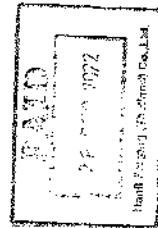
Sample Number 21150446-1
Sample Date Jan 10, 2022 1:47 PM
Sample Description Wastewater
Contract ID L_ESIE_004_2551 Plot P-39-40-41 Site Hail Forging (Thailand) Co., Ltd.
Date Analysis Commenced Jan 10, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							Rayong
BOD (5 days at 20 Degree C)	mg/L	-	2	22	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	97	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.6	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	13	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant.

Sampled By : Pithaya Thonglaeng

Remark :
- LOD : Limit of Detection
- LOQ : Lower than LOQ (Limit of Quantification) / LOR (Limit of Reporting)
- * : Analyte(s) marked * are not included in scope of Accreditation ISO/IEC 17025.



Technical Management

N. Bangphit
Nannorn Benchoongkit
Supervisor
vtd@uagat.com 7-323-a-9445

Approved by

D. Chuan
Doj Changchon
Senior Manager
vtd@uagat.com 7-323-a-9442

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900-511 0144



Analysis / Test Report

TESTING
No.0042
Lot ID: 2210684

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
Date Received : Feb 09, 2022
Date Reported : Feb 15, 2022
Report Number : 2215914-1

P/O :
Project Name : Factory / Monthly
Project Location: ESIE

Page 1 of 1

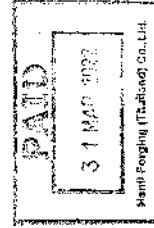
Sample Number 2210684-1
Sample Date Feb 09, 2022 3:09 PM
Sample Description Wastewater
Contract ID L_ESIE_004_2551 Plot P-39-40-41 Site Hail Forging (Thailand) Co., Ltd.
Date Analysis Commenced Feb 09, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							Rayong
BOD (5 days at 20 Degree C)	mg/L	-	2	46	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	149	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	10	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.5	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.4	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	54	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant.

Sampled By : Pithaya Thonglaeng

Remark :
- LOD : Limit of Detection
- LOQ : Lower than LOQ (Limit of Quantification) / LOR (Limit of Reporting)
- * : Analyte(s) marked * are not included in scope of Accreditation ISO/IEC 17025.



Technical Management

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Approved by

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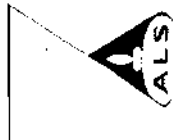
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Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

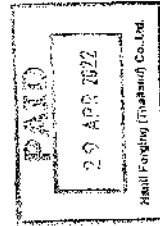
Page 1 of 1

Sample Number 222455-1
Sample Date Mar 04, 2022 1:43 PM
Sample Description Wastewater
Contract ID L_ESIE_004_2551 Plot P-39/40-41 Site Hani Forging (Thailand) Co., Ltd.
Date Analysis Commenced Mar 04, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA).
Physical Property Yellow, a lot of odour, some solid, and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	14	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	34	≤750	APHA (2017), 5200 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.3	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	36.3	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	10	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Chaiyaporn Lertnaitrakulchai

Remark :
- LOD : Limit of Detection
- * : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * refers not included in scope of Accreditation ISO/IEC 17025.



Technical Management N. Banphit Nannorn Bandhachit Supervisor
Approved by D. Chongkiet Senior Manager
Tel: 09-000-9445

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86112/001

51 Report, AL, CL, CP (1-2019)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

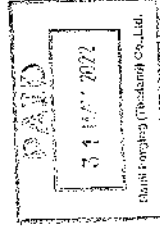
Page 1 of 1

Sample Number 2234996-1
Sample Date Apr 04, 2022 3:50 PM
Sample Description Wastewater
Contract ID L_ESIE_004_2551 Plot P-39/40-41 Site Hani Forging (Thailand) Co., Ltd.
Date Analysis Commenced Apr 04, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA).
Physical Property Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	17	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	51	≤750	APHA (2017), 5200 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *		-	-	7.7	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	31.1	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	23	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Nannorn Bandhachit

Remark :
- LOD : Limit of Detection
- * : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * refers not included in scope of Accreditation ISO/IEC 17025.



Technical Management N. Banphit Nannorn Bandhachit Supervisor
Approved by D. Chongkiet Senior Manager
Tel: 09-000-9445

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ADDRESS 616/10 Moo 5 T. Mueang Khui A. Phrakdaeng Rayong 21140 Thailand

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46031/001

51 Report, AL, CL, CP (1-2019)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Random Check

Project Location : ESIE

TESTING
No.0042
Lot ID: 2249452

Date Received : May 04, 2022

Date Reported : May 11, 2022

Report Number : 2297153-1

Page 1 of 1

Sample Number : 2249452-1
Sample Date : May 04, 2022 2:00 PM
Sample Description : Wastewater
Contract ID : LESIE-004-2551
Date Analysis Commenced : May 04, 2022
Condition of Sample : Confirmed in one amber glass bottle, seven plastic bottles and two glass vials. Sample containers comply to pretreatment - Yellow, a lot of odour, some solid and turbid

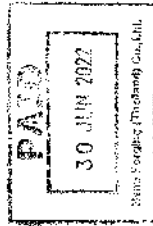
Physical Property :
Analyte : Unit : LOD : LOQ (LOR) : Result : Method : Testing Location :

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Water Testing						
BOD (5 days at 20 Degree C)	mg/L	2	23	23	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	82	APHA (2017), 5220 D	Rayong
Color (at Original pH)	ADMI	5	47	47	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	5	46	46	APHA (2017), 2120 F	Rayong
Gravimetric as HCl	mg/L	0.001	0.005	Not Detected	Based on APHA (2017), 4500-CHC, (E)	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	3	6	6	Based on APHA (2017), 5520 B	Rayong
pH (on site) *				7.6	Based on APHA (2017), 4500-H	Rayong
Phenol	mg/L	0.005	0.01	0.06	Based on APHA (2017), 5530 D	Rayong
Temperature *	Degree C			31.1	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	5	178	178	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	5	14	14	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Paramet Saktrakun , Thamagorn Namsakorn

Remark :
* LOD : Limit of Detection
* LOQ : Lower than LOQ (Limit of Quantification) / LOR (Limit of Reporting)
* Analytical method : figure not included in scope of Accreditation ISO/IEC 17025.



Technical Management

Naramee Banchoangkit
Supervisor

vat2004042-3-23-9-9445

Approved by

Dej Chongchon
Senior Manager

vat2004042-3-23-9-9442

112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong Thailand 21140

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485-04 THAIL

5/10/2022, 11:56 am (11:56 am)

485-04 THAIL

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485-04 THAIL



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Random Check

Project Location : ESIE

TESTING
No.0009
Lot ID: 2275164

Date Received : Jul 04, 2022

Date Reported : Jul 11, 2022

Report Number : 2349639-2

Page 1 of 1

Sample Number : 2275164-1
Sample Date : Jul 04, 2022 9:01 AM
Sample Description : Wastewater
Contract ID : LESIE-117-2550
Date Analysis Commenced : Jul 05, 2022
Condition of Sample : Confirmed in two glass vials, one amber glass bottle and seven plastic bottles. Sample containers comply to pretreatment - Yellow, a lot of odour, some solid and turbid

Physical Property :
Analyte : Unit : LOD : LOQ (LOR) : Result : Method : Testing Location :

Analyte	Unit	LOD	LOQ (LOR)	Result	Method	Testing Location
Mercury Testing						
Arsenic	mg/L	0.0003	0.0005	0.002	Based on APHA (2017), 3125	Bangkok
Barium	mg/L	0.0003	0.0005	0.08	Based on APHA (2017), 3125	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	Based on APHA (2017), 3125	Bangkok
Copper	mg/L	0.0003	0.0005	0.07	Based on APHA (2017), 3125	Bangkok
Hexavalent Chromium	mg/L	0.0003	0.0005	<0.01	Based on APHA (2017), 3500-Cr (6)	Bangkok
Lead	mg/L	0.0003	0.0005	0.005	Based on APHA (2017), 3125	Bangkok
Manganese	mg/L	0.0003	0.0005	0.07	Based on APHA (2017), 3125	Bangkok
Mercury *	mg/L	0.0001	0.0005	<0.0005	Based on APHA (2017), 3125	Bangkok
Nickel	mg/L	0.0003	0.0005	0.006	Based on APHA (2017), 3125	Bangkok
Selenium	mg/L	0.0003	0.0005	<0.0005	Based on APHA (2017), 3125	Bangkok
Trivalent Chromium *	mg/L	0.01	0.01	<0.01	Based on APHA (2017), 3125	Bangkok
Zinc	mg/L	0.003	0.005	0.17	Based on APHA (2017), 3125	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Woratip Puchaisaeng , Nattapong Seem

Remark :
* LOD : Limit of Detection
* LOQ : Lower than LOQ (Limit of Quantification) / LOR (Limit of Reporting)
* Analytical method : figure not included in scope of Accreditation ISO/IEC 17025.

Technical Management

Savitree N.
Manager

Approved by

Kanokorn Anuk
Senior Manager

vat2004042-3-204-9-6111

112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong Thailand 21140

ADDRESS 104 Phatthanaburi Rd. Phrasaeng Phrasaeng, Klong Sam Lan, Bangkok 10250 Thailand PHONE +66 0 2746 3800 FAX +66 0 2746 3187

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485-04 THAIL

5/10/2022, 11:56 am (11:56 am)

485-04 THAIL

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485-04 THAIL



Analysis / Test Report

TESTING
No.0042
Lot ID: 2275164

Date Received : Jul 04, 2022
Date Reported : Jul 10, 2022
Report Number : 2249639-3

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Random Check
Project Location : ESIE

Page 1 of 1

Sample Number	2275164-1
Sample Date	Jul 04, 2022 9:01 AM
Sample Description	Wastewater
Contract ID	ESIE_117_2550
Plot	P-15
Site	Hitech Astemo Rayong Ltd.
Location	Factory 1
Date Analysis Commenced	Jul 05, 2022
Condition of Sample	Contained in two glass vials; one amber glass bottle and seven plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odor, some solid and turbid

Analyte	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Iron	mg/L	0.003	0.005	0.29	≤10.0	Based on APHA (2017), 3125	Bangkok
Water Testing							
Fluoride	mg/L	0.05	0.2	0.2	≤5	APHA (2017), 4500-F(C)	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Winklop Hunchabaw, Nontawat Sorn

Remarks :
- LOD : Limit of Detection
- "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analytical method : In-line not included in scope of Accreditation ISO/IEC 17025.
- [X] Analysis conducted by ALS Laboratory Group (Thailand) Co., Ltd. Bangkok Branch, ISO Accreditation No. 6099.
- This laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Approved by

D. Chongchon

Dir. Chongchon
Senior Manager

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08-5478946

Signed: M. Chongchon



Analysis / Test Report

TESTING
No.0042
Lot ID: 2275165

Date Received : Jul 04, 2022
Date Reported : Jul 11, 2022
Report Number : 2249641-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140
P/O :
Project Name : Random Check
Project Location : ESIE

Page 1 of 1

Sample Number	2275165-1
Sample Date	Jul 04, 2022 8:57 AM
Sample Description	Wastewater
Contract ID	ESIE_118_2550
Plot	P-16
Site	Hitech Astemo Rayong Ltd.
Location	Factory 2
Date Analysis Commenced	Jul 04, 2022
Condition of Sample	Contained in two glass vials; one amber glass bottle and seven plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Yellow, a lot of odor, some solid and turbid

Analyte	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	61	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	166	≤750	APHA (2017), 5210 D	Rayong
Color (at Original pH)	ADMI	-	5	119	≤500	APHA (2017), 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	136	≤500	APHA (2017), 2120 F	Rayong
Cyanide as HCN	mg/L	0.001	0.005	Not Detected	≤0.2	Based on APHA (2017), 4500-CN(C), (F)	Rayong
Formaldehyde	mg/L	0.03	0.1	0.1	≤1	Wastewater Analysis	Rayong
Oil & Grease	mg/L	-	3	12	≤10	Based on APHA (2017), 8260 B	Rayong
pH (on site) *		-	-	7.7	5.5-9.0	Based on APHA (2017), 4500-H (F)	Rayong
Phenol	mg/L	0.005	0.01	0.10	≤1	APHA (2017), 5510 D	Rayong
Temperature *	Degree C	-	-	31.0	≤45	Based on APHA (2017), 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	412	≤2000	APHA (2017), 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	33	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2550 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant

Sampled By : Winklop Hunchabaw, Nontawat Sorn

Remarks :
- LOD : Limit of Detection
- "C" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analytical method : In-line not included in scope of Accreditation ISO/IEC 17025.
- This laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banchapit

Technical Management
Supervisor

Approved by

D. Chongchon

Dir. Chongchon
Senior Manager

Verification: 2-323-9-9445

Verification: 2-323-9-9442

The above results are valid for the use of the laboratory only. They are not to be used for any other purpose. The laboratory is not responsible for the results of any other tests not specified in the contract. The laboratory is not responsible for the results of any other tests not specified in the contract.

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08-5478946

Signed: M. Chongchon



TESTING

Lot ID: 2275165
Date Received : Jul 04, 2022
Date Reported : Jul 11, 2022
Report Number : 2349641-2

Report Number : 2349641-2

Page 1 of 1

Containers comply to pretreatment -

Method	Testing Location
Based on APHA (2017), 3125	Bangkok
Based on APHA (2017), 3125	Bangkok
Based on APHA (2017), 3125	Bangkok
Based on APHA (2017), 3125	Bangkok
Based on APHA (2017), 3500-Cr (B)	Bangkok
Based on APHA (2017), 3125	Bangkok
Based on APHA (2017), 3125	Bangkok
Based on APHA (2017), 3112	Bangkok
Based on APHA (2017), 3125	Bangkok
Based on APHA (2017), 3125	Bangkok
Calculated	Bangkok
Based on APHA (2017), 3125	Bangkok

specific from factory discharge to central

Approved by _____

Kanokkorn Anek
Senior Manager
ฉบับพิมพ์ที่ ๖-๒๐๔-๕-๕๑๑

7 Zone Vertical Wireless Control Module

MF: +66 0 2760 3000 FAX: +66 0 2760 3197

1

S:\np\p\lsl\00...Gd\gdl (6159971)



TESTING

Lot ID: 2288295
Date Received : Aug 03, 2022
Date Reported : Aug 09, 2022
Report Number : 2203050.1
No. 0042

Report Number: 2303089-1

to pretreatment - prescription

Method
APHA (2017), 5210 B
APHA (2017), 5220 D
Based on APHA (2017), 5520 B
Based on APHA (2017), 4500-H
(B)
Based on APHA (2017), 2530 B
APHA (2017), 2540 D

eristic from factory discharge to

Approved by

Dr. Francis.

Deji Changchun

Senior Manager
முதுவையாளர் 7-323-8-9

any form without written consent from the
 fall. SS5 FAX +66 0 3304 0556

10/10/2017 11:11 AM



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory Monthly

Project Location : ESIE

Page 1 of 1

Sample Number : 2288296-1

Sample Date : Aug 03, 2022 10:20 AM

Sample Description : Wastewater

Contract ID : L ESIE_110_2550 Plot P-15 Site Haechi Astemo Rayong Ltd.

Location : Factory 2

Date Analysis Commenced : Aug 03, 2022

Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / ISO/IEC 17025)

Physical Property : Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							Rayong
BOD (5 days at 20 Degree C)	mg/L	-	2	68	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	185	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Based on APHA (2017), 5520 B	Rayong
pH (in site) *	-	-	-	7.9	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	30.3	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	40	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant.

Sampled By : Pithaya Thonglaeng

Remark :

- LOD : Limit of Detection
- "u" : Lower than LOQ (Limit of Quantification) / LUK (Limit of Reporting)
- Analyzed marked * : Value not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Baingit
Naruman Baingit
Supervisor
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Approved by

D. Chongchani
Dej Chongchani
Senior Manager
visit@alsglobal.com 3-323-a-9442

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RIGHT SOLUTIONS LIMITED (THAILAND)
#0517/PK02 S040905A_MG_01 (2-10-04)



Analysis / Test Report

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :

Project Name : Factory Monthly

Project Location : ESIE

Page 1 of 1

Sample Number : 22104434-1

Sample Date : Sep 05, 2022 2:02 PM

Sample Description : Wastewater

Contract ID : L ESIE_117_2550 Plot P-15 Site Haechi Astemo Rayong Ltd.

Location : Factory 1

Date Analysis Commenced : Sep 05, 2022

Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / ISO/IEC 17025)

Physical Property : Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							Rayong
BOD (5 days at 20 Degree C)	mg/L	-	2	181	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	408	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	10	≤10	Based on APHA (2017), 5520 B	Rayong
pH (in site) *	-	-	-	7.9	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.8	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	65	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater treatment plant.

Sampled By : Pithaya Thonglaeng

Remark :

- LOD : Limit of Detection
- "u" : Lower than LOQ (Limit of Quantification) / LUK (Limit of Reporting)
- Analyzed marked * : Value not included in scope of Accreditation ISO/IEC 17025.
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Technical Management

N. Baingit
Naruman Baingit
Supervisor
visit@alsglobal.com 3-323-a-9445

Approved by

D. Chongchani
Dej Chongchani
Senior Manager
visit@alsglobal.com 3-323-a-9442

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RIGHT SOLUTIONS LIMITED (THAILAND)
S040905A_MG_01 (4-7-04)



Analysis / Test Report

TESTING
No. 0042
Lot ID: 22104435
Date Received : Sep 05, 2022
Date Reported : Sep 12, 2022
Report Number : 2416135-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number : 22104435-1
Sample Date : Sep 05, 2022 1:59 PM
Sample Description : Wastewater
Contract ID : L ESIE_118_2550 Plot P-15 Site Hiachi Astano Rayong Ltd.
Location : Factory 2
Date Analysis Commenced : Sep 05, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of colour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							Rayong
BOD (5 days at 20 Degree C)	mg/L	-	2	61	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	190	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	10	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	7.5	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	29.6	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	39	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Pithaya Thongtong

Remark :
- LOD : Limit of Detection
- LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- * : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analytical method : refers not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphit

Narumon Banphongkit
Supervisor
wa00000071-323-a-9445

Approved by

N. Banphit

Dog Chongchon
Senior Manager
wa00000071-323-a-9442

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010-61613444



Analysis / Test Report

TESTING
No. 0042
Lot ID: 22118822
Date Received : Oct 03, 2022
Date Reported : Oct 10, 2022
Report Number : 2448471-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Phukdaeng, Amphur Phukdaeng, Rayong
Thailand 21140
P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number : 22118822-1
Sample Date : Oct 03, 2022 11:10 AM
Sample Description : Wastewater
Contract ID : L ESIE_117_2550 Plot P-15 Site Hiachi Astano Rayong Ltd.
Location : Factory 1
Date Analysis Commenced : Oct 03, 2022
Condition of Sample : Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property : Yellow, a lot of colour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							Rayong
BOD (5 days at 20 Degree C)	mg/L	-	2	80	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	5	220	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Based on APHA (2017), 5520 B	Rayong
pH (on site) *	-	-	-	8.1	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	-	28.2	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	46	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant
Sampled By : Piranet Sakthayul

Remark :
- LOD : Limit of Detection
- LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- * : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analytical method : refers not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Banphit

Narumon Banphongkit
Supervisor
wa00000071-323-a-9445

Approved by

N. Banphit

Dog Chongchon
Senior Manager
wa00000071-323-a-9442

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Analysis / Test Report

TESTING
No.0042
Lot ID: 22118823
Date Received : Oct 03, 2022
Date Reported : Oct 10, 2022
Report Number : 246474-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number 22118823-1
Sampled Date Oct 03, 2022 11:07 AM
Sample Description Wastewater
Contract ID L_ESIE_110_2550 Plot P-16 Site Hla-chi Aekono Rayong Ltd.
Location Factory 2
Date Analysis Commenced Oct 03, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						Rayong
BOD (5 days at 20 Degree C)	mg/L	2	45	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	167	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	3	9	≤10	Based on APHA (2017), 5520 B	Rayong
pH (at site) *		-	7.8	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	29.1	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 105-105 Degree C	mg/L	5	37	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Panneet Sathayakun

Remark :
- LOD : Limit of Detection
- < : Lower than LOD (Limit of Quantitation) / (or Limit of Reporting)
- Analyte(s) and their unit(s) not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Bangphit

Manojun Bandhagitt
Supervisor
whatsapp: 9-323-9-9445

Approved by

D. Chingchon

Dej Chingchon
Senior Manager
whatsapp: 9-323-9-9442

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400-61-0040

5, Suphachulalongkornrajavidyalaya University



Analysis / Test Report

TESTING
No.0042
Lot ID: 22130129
Date Received : Nov 02, 2022
Date Reported : Nov 02, 2022
Report Number : 2474895-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambon Pluakdaeng, Amphur Pluakdaeng, Rayong
Thailand 21140

P/O :
Project Name : Factory / Monthly
Project Location : ESIE

Page 1 of 1

Sample Number 22130129-1
Sampled Date Nov 02, 2022 11:29 AM
Sample Description Wastewater
Contract ID L_ESIE_117_2550 Plot P-15 Site Hla-chi Aekono Rayong Ltd.
Location Factory 1
Date Analysis Commenced Nov 02, 2022
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	Result	Guideline / Specification	Method	Testing Location
Water Testing						Rayong
BOD (5 days at 20 Degree C)	mg/L	2	163	≤500	APHA (2017), 5210 B	Rayong
COD	mg/L	1.5	268	≤750	APHA (2017), 5220 D	Rayong
Oil & Grease	mg/L	3	12	≤10	Based on APHA (2017), 5520 B	Rayong
pH (at site) *		-	8.2	5.5-9.0	Based on APHA (2017), 4500-H (B)	Rayong
Temperature *	Degree C	-	28.9	≤45	Based on APHA (2017), 2550 B	Rayong
Total Suspended Solids Dried at 105-105 Degree C	mg/L	5	43	≤200	APHA (2017), 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central wastewater Treatment Plant

Sampled By : Panneet Sathayakun

Remark :
- LOD : Limit of Detection
- < : Lower than LOD (Limit of Quantitation) / (or Limit of Reporting)
- Analyte(s) and their unit(s) not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. Bangphit

Manojun Bandhagitt
Supervisor
whatsapp: 9-323-9-9445

Approved by

D. Chingchon

Dej Chingchon
Senior Manager
whatsapp: 9-323-9-9442

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400-61-0040

5, Suphachulalongkornrajavidyalaya University



Analysis / Test Report

TESTING

No.0042

Lot ID: 22140152

Date Received : Dec 01, 2022

Date Reported : Dec 07, 2022

Report Number : 2564621-1

Client : Eastern Seaboard Industrial Estate (Rayong) Co., Ltd.
112 Moo 4, Highway 331 Road, Tambol Phukdeng, Amphur Phukdeng, Rayong
Thailand 21140

P/O : Factory / Monthly

Project Name : Factory / Monthly

Project Location: ESE

Page 1 of 1

Sample Number		22140152-1					
Sample Date		Dec 01, 2022 9:57 AM					
Sample Description		Wastewater					
Contract ID		L_ESE_118_2550 Plot P-16					
Location		Site Hiraichi Astemo Rayong Ltd.					
Data Analysis Commenced		Dec 01, 2022					
Condition of Sample		Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)					
Physical Property		Yellow, a bit of colour, some solid and turbid					
Analyte	Unit	LOD	LOQ (LOD)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2	85	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B	Rayong
COD	mg/L	1.5	5	213	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease *	mg/L	-	3	15	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5230 B	Rayong
pH (on site) *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.3	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Suspended Solids Dried at 102-105 Degree C	mg/L	-	5	41	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guidelines : Notification of the Industrial Estate Authority of Thailand No.76, B.E. 2560 : Criteria of wastewater characteristic from factory discharge to central

Wastewater Treatment Plant

Sampled By : Supot Samnueh

Remark :
- LOD : Limit of Detection
- * : Lower than LOD (Limit of Reporting)
- Analytes marked * before not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accredited by an accredited laboratory complying with the ISO/IEC 17025.

Technical Management

N. B. B. B. B.

Technical Management

Supervisor

Watthana 7 323-9 4945

Approved by

D. B. B. B.

Supervisor

Watthana 7 323-9 4945

Senior Manager

Watthana 7 323-9 4945

Watthana 7 323-9 4945

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