โรงงานอุตสาหกรรม

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471061
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3034697-1

Sample Number 2471061-1
Sampled Date Jul 08, 2024 4:20 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 001 2567 **Plot** A01 **Site** ACG CAPSULES (THAILAND) CO.,LTD
Date Analysis Commenced Jul 08, 2024
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	-	2.0	6.2	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	30	≤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) *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.1	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	420	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	16	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ว-0011

Technical Management Chontichak — Chontcha Sultongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471061
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3034697-1

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 Chontichak — Chontcha Sultongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471083
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032401-1

Sample Number 2471083-1
Sampled Date Jul 04, 2024 2:29 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 005 2557 **Plot** A34/2 **Site** Asian Unity Part Co.,Ltd
Date Analysis Commenced Jul 04, 2024
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	-	2.0	20.9	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	63	≤400	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) *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	612	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	14	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Chontichak — Chontcha Sultongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471083
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032401-1

Sampling By : Wasan Kmunb ทะเบียนเลขที่ ว-323-ว-0019

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 Chontichak — Chontcha Sultongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471087
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3032409-1

Sample Number 2471087-1
Sampled Date Jul 08, 2024 11:16 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 001 2559 **Plot** A29/1,A29/2 **Site** Beko Thai Co.,Ltd
Location Point 1
Date Analysis Commenced Jul 08, 2024
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	-	2.0	81.4	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	196	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	8	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.6	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	376	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	34	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471087
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3032409-1

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ว-0011

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2471089
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3032411-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number 2471089-1
Sampled Date Jul 08, 2024 11:26 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 007 2559 **Plot** A29/3 **Site** Beko Thai Co.,Ltd.
Location Point 2
Date Analysis Commenced Jul 08, 2024
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	-	2.0	26.9	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	108	≤400	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	380	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	22	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-9446

Approved by Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2471089
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3032411-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ว-0011

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 Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-9446

Approved by Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2471072
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032395-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number 2471072-1
Sampled Date Jul 04, 2024 10:42 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 013 2556 **Plot** A-16A **Site** Biltech Automotive Co.,Ltd
Date Analysis Commenced Jul 04, 2024
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	-	2.0	71.1	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	190	≤400	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	464	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Chontichak
Chontecha Suhongkoch
Scientist (3)
ทะเบียนเลขที่ ว-323-ว-9449

Approved by Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2471072
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032395-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Wasan Knunh ทะเบียนเลขที่ ว-323-ว-0019

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 Chontichak
Chontecha Suhongkoch
Scientist (3)
ทะเบียนเลขที่ ว-323-ว-9449

Approved by Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2471188
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3032426-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number 2471188-1
Sampled Date Jul 08, 2024 1:38 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 003 2556 **Plot** A-28 **Site** Caterpillar (Thailand) Limited
Location Factory 1 Point 1
Date Analysis Commenced Jul 08, 2024
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	-	2.0	79.2	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	285	≤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) *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	480	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	54	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-9446

Approved by Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2471188
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3032426-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-9476 , Samart Khumphee ทะเบียนเลขที่ ว-204-ว-0084

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 Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-9446

Approved by Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-9442

ALS

Analysis / Test Report

TESTING
No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471188
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 1032426-2

Sample Number 2471188-1
Sampled Date Jul 08, 2024 3:38 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 003 2556 **Plot** A-28 **Site** Caterpillar (Thailand) Limited
Location Factory 1 Point 1
Date Analysis Commenced Jul 09, 2024
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
Metals Testing							
Lead	mg/L	0.0003	0.0005	0.003	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-9476 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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: Saowitree N. — Saowitree Nimnangam, Manager, ทะเบียนเลขที่ ว-204-ว-0007
Approved by: Kanokkorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471189
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 1032427-1

Sample Number 2471189-1
Sampled Date Jul 08, 2024 3:51 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 004 2556 **Plot** A-28 **Site** Caterpillar (Thailand) Limited
Location Factory 1 Point 2
Date Analysis Commenced Jul 08, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	28	≤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) *		-	-	6.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.7	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	176	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	14	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471189
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 1032427-1

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-9476 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

ALS

Analysis / Test Report

TESTING
No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471189
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 1032427-2

Sample Number 2471189-1
Sampled Date Jul 08, 2024 3:51 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 004 2556 **Plot** A-28 **Site** Caterpillar (Thailand) Limited
Location Factory 1 Point 2
Date Analysis Commenced Jul 09, 2024
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							
Lead	mg/L	0.0003	0.0005	0.001	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-9476 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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: Saowitree N. — Saowitree Nimnangam, Manager, ทะเบียนเลขที่ ว-204-ว-0007
Approved by: Kanokkorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471076
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 1032398-1

Sample Number 2471076-1
Sampled Date Jul 04, 2024 1:56 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 002 2557 **Plot** A19/2 **Site** Chuhatsu (Thailand) Ltd
Date Analysis Commenced Jul 04, 2024
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	-	2.0	90.3	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	208	≤400	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) *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	180	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	20	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Chontichak — Chonticha Subongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471076
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 1032398-1

Sampling By : Wasan Kruanh ทะเบียนเลขที่ ว-323-ว-0019

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: Chontichak — Chonticha Subongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471199
Date Received : Jul 10, 2024
Date Reported : Jul 16, 2024
Report Number : 3032524-1

Sample Number	2471199-1
Sampled Date	Jul 10, 2024 3:17 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2564 **Plot** A53/2 **Site** Electrolux Professional (Thailand) Co.,Ltd
Date Analysis Commenced	Jul 10, 2024
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	-	2.0	38.4	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	136	≤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) *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.3	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	284	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	52	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun [illegible] ว-323-ส-9476 , Kardbundit Kimupavand [illegible] ว-204-ส-0001

Technical Management Chontichak — Chontecha Sutongkech, Scientist (3), [illegible] ว-323-ส-9449
Approved by Dej Changchon, Senior Manager, [illegible] ว-323-ส-9442

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471199
Date Received : Jul 10, 2024
Date Reported : Jul 16, 2024
Report Number : 3032524-1

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 Chontichak — Chontecha Sutongkech, Scientist (3), [illegible] ว-323-ส-9449
Approved by Dej Changchon, Senior Manager, [illegible] ว-323-ส-9442

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Analysis / Test Report

TESTING
No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471199
Date Received : Jul 10, 2024
Date Reported : Jul 17, 2024
Report Number : 3032524-2

Sample Number	2471199-1
Sampled Date	Jul 10, 2024 3:17 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2564 **Plot** A53/2 **Site** Electrolux Professional (Thailand) Co.,Ltd
Date Analysis Commenced	Jul 11, 2024
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	0.69	≤5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun [illegible] ว-323-ส-9476 , Kardbundit Kimupavand [illegible] ว-204-ส-0001

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 Sawitree N. — Sawitree Nosangam, Manager, [illegible] ว-204-ส-0007
Approved by Kanokkorn Anek, Assistant General Manager, [illegible] ว-204-ส-0004

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471193
Date Received : Jul 10, 2024
Date Reported : Jul 16, 2024
Report Number : 3032465-1

Sample Number	2471193-1
Sampled Date	Jul 10, 2024 4:22 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 012 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Canteen/Toilet
Date Analysis Commenced	Jul 10, 2024
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	-	2.0	107	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	229	≤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	8	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	7.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.0	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	372	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	38	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chontichak — Chontecha Sutongkech, Scientist (3), [illegible] ว-323-ส-9449
Approved by Dej Changchon, Senior Manager, [illegible] ว-323-ส-9442

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Analysis / Test Report

TESTING
No.0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471193
Date Received : Jul 10, 2024
Date Reported : Jul 16, 2024
Report Number : 3032465-1

Sampling By : Paramet Sattayakun [illegible] ว-323-ส-9476

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 Chontichak — Chontecha Sutongkech, Scientist (3), [illegible] ว-323-ส-9449
Approved by Dej Changchon, Senior Manager, [illegible] ว-323-ส-9442

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Analysis / Test Report

TESTING
No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471193
Date Received : Jul 10, 2024
Date Reported : Jul 17, 2024
Report Number : 3032465-2

Sample Number	2471193-1
Sampled Date	Jul 10, 2024 4:22 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 012 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Canteen/Toilet
Date Analysis Commenced	Jul 11, 2024
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
Metals Testing							
Zinc	mg/L	0.003	0.005	0.24	≤5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun [illegible] ว-323-ส-9476

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 Sawitree N. — Sawitree Nosangam, Manager, [illegible] ว-204-ส-0007
Approved by Kanokkorn Anek, Assistant General Manager, [illegible] ว-204-ส-0004

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471196
Date Received : Jul 10, 2024
Date Reported : Jul 16, 2024
Report Number : 3032483-1

Sample Number 2471196-1
Sampled Date Jul 10, 2024 4:00 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 014 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location Factory 2 Gate 4
Date Analysis Commenced Jul 10, 2024
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	-	2.0	76.5	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	271	≤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	9	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.0	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	364	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	57	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chontichak — Chonticha Sutongkoch, Scientist (1)
Approved by Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471196
Date Received : Jul 10, 2024
Date Reported : Jul 16, 2024
Report Number : 3032483-1

Sampling By : Paramet Sattayakun ว-323-ว-9476

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 Chontichak — Chonticha Sutongkoch, Scientist (1)
Approved by Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471196
Date Received : Jul 10, 2024
Date Reported : Jul 17, 2024
Report Number : 3032483-2

Sample Number 2471196-1
Sampled Date Jul 10, 2024 4:00 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 014 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location Factory 2 Gate 4
Date Analysis Commenced Jul 11, 2024
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	0.22	≤5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ว-323-ว-9476

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 Sawitree N. — Sawitree Nonangam, Manager
Approved by Karnthorn Arek, Assistant General Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471197
Date Received : Jul 10, 2024
Date Reported : Jul 16, 2024
Report Number : 3032485-1

Sample Number 2471197-1
Sampled Date Jul 10, 2024 4:14 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 013 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location Factory 2 Toilet/WSSS Testing/Q-Rate
Date Analysis Commenced Jul 10, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	55.4	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	270	≤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	8	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	460	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	44	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chontichak — Chonticha Sutongkoch, Scientist (1)
Approved by Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471197
Date Received : Jul 10, 2024
Date Reported : Jul 16, 2024
Report Number : 3032485-1

Sampling By : Paramet Sattayakun ว-323-ว-9476 , Kardbundit Kitnupravand ว-204-ว-0001

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 Chontichak — Chonticha Sutongkoch, Scientist (1)
Approved by Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0008

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471197
Date Received : Jul 10, 2024
Date Reported : Jul 17, 2024
Report Number : 3032485-2

Sample Number 2471197-1
Sampled Date Jul 10, 2024 4:14 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 013 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location Factory 2 Toilet/WSSS Testing/Q-Rate
Date Analysis Commenced Jul 11, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.26	≤5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ว-323-ว-9476 , Kardbundit Kitnupravand ว-204-ว-0001

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 Sawitree N. — Sawitree Nonangam, Manager
Approved by Karnthorn Arek, Assistant General Manager

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2471053
Date Received : Jul 10, 2024
Date Reported : Jul 16, 2024
Report Number : 3032383-1

Sample Number	2471053-1
Sampled Date	Jul 10, 2024 3:53 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2556 **Plot** A-34/1 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 3
Date Analysis Commenced	Jul 10, 2024
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	-	2.0	78.9	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	179	≤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) *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	312	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	63	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chontichak — Chontcha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2471053
Date Received : Jul 10, 2024
Date Reported : Jul 16, 2024
Report Number : 3032383-1

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-9476

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 Chontichak — Chontcha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2471194
Date Received : Jul 10, 2024
Date Reported : Jul 16, 2024
Report Number : 3032467-1

Sample Number	2471194-1
Sampled Date	Jul 10, 2024 3:06 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_011_2554 **Plot** A-34A,A31A **Site** Electrolux Thailand Co.,Ltd
Location	Factory 1
Date Analysis Commenced	Jul 10, 2024
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	-	2.0	132	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	73	≤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) *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.3	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	304	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	18	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chontichak — Chontcha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2471194
Date Received : Jul 10, 2024
Date Reported : Jul 16, 2024
Report Number : 3032467-1

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-9476 , Kardbundit Kitrupavanit ทะเบียนเลขที่ ว-204-ว-0001

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 Chontichak — Chontcha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0009
Lot ID: 2471194
Date Received : Jul 10, 2024
Date Reported : Jul 17, 2024
Report Number : 3032467-2

Sample Number	2471194-1
Sampled Date	Jul 10, 2024 3:06 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_011_2554 **Plot** A-34A,A31A **Site** Electrolux Thailand Co.,Ltd
Location	Factory 1
Date Analysis Commenced	Jul 11, 2024
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	0.13	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-9476 , Kardbundit Kitrupavanit ทะเบียนเลขที่ ว-204-ว-0001

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 Sawitree N. — Sawitree Nonangam, Manager, ทะเบียนเลขที่ ว-204-ว-0007
Approved by Kanokkorn Arek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2471079
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032399-1

Sample Number	2471079-1
Sampled Date	Jul 04, 2024 2:06 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_003_2557 **Plot** A19/1 **Site** FITESAONC Co.,Ltd
Location	Point 1 (In front of the factory)
Date Analysis Commenced	Jul 04, 2024
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	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤400	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) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	23.8	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	168	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	15	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.(Expansion and Remaining Area after July 2011)

Technical Management Chontichak — Chontcha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2471079
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : JO32399-1

Sampling By : Wasan Kmunb

Remark :
LOD : Limit of Detection
"<" : Lower than LOQ (Limit of Quantization) / 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: Chonticha Sutongkoch, Scientist (3)
Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2471081
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : JO32400-1

Sample Number	2471081-1
Sampled Date	Jul 04, 2024 2:01 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 004 2557 Plot A19/1 Site FITESACHIC Co.,Ltd
Location	Point 2 (inside of the factory)
Date Analysis Commenced	Jul 04, 2024
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	-	2.0	56.8	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	138	≤400	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) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	28.7	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	352	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	26	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Chonticha Sutongkoch, Scientist (3)
Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2471081
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : JO32400-1

Sampling By : Wasan Kmunb

Remark :
LOD : Limit of Detection
"<" : Lower than LOQ (Limit of Quantization) / 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: Chonticha Sutongkoch, Scientist (3)
Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2471052
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : JO32382-1

Sample Number	2471052-1
Sampled Date	Jul 04, 2024 10:34 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 009 2554 Plot A20-21 Site Fuburg Industrial Co.,Ltd
Date Analysis Commenced	Jul 04, 2024
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	-	2.0	8.5	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	31	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.1	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	224	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wasan Kmunb

Technical Management: Chonticha Sutongkoch, Scientist (3)
Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2471052
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : JO32382-1

Remark :
LOD : Limit of Detection
"<" : Lower than LOQ (Limit of Quantization) / 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: Chonticha Sutongkoch, Scientist (3)
Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2471048
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : JO32378-1

Sample Number	2471048-1
Sampled Date	Jul 04, 2024 9:27 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2554 Plot A-25 Site Guardian Industries Rayong Co.,Ltd
Location	Point 1
Date Analysis Commenced	Jul 04, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	480	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Chonticha Sutongkoch, Scientist (3)
Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2471048
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032378-1

Sampling By : Wasan Kmunb ทะเบียนเลขที่ ว-323-ว-0019

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
Chonticha Sutongkoch Scientist (3) ทะเบียนเลขที่ ว-323-ว-9449	Dej Changchon Senior Manager ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2471047
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032376-1

Sample Number	2471047-1
Sampled Date	Jul 04, 2024 9:21 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002_2554 **Plot** A-25 **Site** Guardian Industries Rayong Co.,Ltd
Location	Point 2
Date Analysis Commenced	Jul 04, 2024
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	-	2.0	21.0	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	85	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	260	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	22	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management	Approved by
Chonticha Sutongkoch Scientist (3) ทะเบียนเลขที่ ว-323-ว-9449	Dej Changchon Senior Manager ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2471047
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032376-1

Sampling By : Wasan Kmunb ทะเบียนเลขที่ ว-323-ว-0019

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
Chonticha Sutongkoch Scientist (3) ทะเบียนเลขที่ ว-323-ว-9449	Dej Changchon Senior Manager ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2471049
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032379-1

Sample Number	2471049-1
Sampled Date	Jul 04, 2024 9:36 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 004_2554 **Plot** A-25 **Site** Guardian Industries Rayong Co.,Ltd
Location	Point 3
Date Analysis Commenced	Jul 04, 2024
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	-	2.0	23.1	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	107	≤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) *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	344	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	18	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management	Approved by
Chonticha Sutongkoch Scientist (3) ทะเบียนเลขที่ ว-323-ว-9449	Dej Changchon Senior Manager ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No.0042
Lot ID: 2471049
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032379-1

Sampling By : Wasan Kmunb ทะเบียนเลขที่ ว-323-ว-0019

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
Chonticha Sutongkoch Scientist (3) ทะเบียนเลขที่ ว-323-ว-9449	Dej Changchon Senior Manager ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2471054
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3032384-1

Sample Number	2471054-1
Sampled Date	Jul 08, 2024 10:49 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002_2556 **Plot** A-24 **Site** GULF JP NLL Company Ltd
Date Analysis Commenced	Jul 08, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	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) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.2	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2084	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	8	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Suramit Nanpong ทะเบียนเลขที่ ว-323-ว-0011

Technical Management	Approved by
Chonticha Sutongkoch Scientist (3) ทะเบียนเลขที่ ว-323-ว-9449	Dej Changchon Senior Manager ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471054
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3032384-1

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: Chontuchak — Chontecha Suhongkoh, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471093
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3032419-1

Sample Number : 2471093-1
Sampled Date : Jul 08, 2024 2:31 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 001 2562 **Plot** A348,A34C/1 **Site** Gulf NLL2 Company Limited
Location : บ่อที่ 1 บ่อน้ำทิ้งต่อน้ำ
Date Analysis Commenced : Jul 08, 2024
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	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤400	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	604	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471093
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3032419-1

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-9476

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471200
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3032515-1

Sample Number : 2471200-1
Sampled Date : Jul 08, 2024 2:14 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 002 2562 **Plot** A348,A34C/1 **Site** Gulf NLL2 Company Limited
Location : บ่อที่2 บ่อพักน้ำทิ้งก่อนปล่อยไปบ่อพัก
Date Analysis Commenced : Jul 08, 2024
Condition of Sample : Contained in 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	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.4	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2284	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	8	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017)
Note : Dissolved Oxygen guideline set by Environmental Impact Assessment Report of Gulf NLL2 Co., Ltd
Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-9476 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471200
Date Received : Jul 08, 2024
Date Reported : Jul 16, 2024
Report Number : 3032515-2

Sample Number : 2471200-1
Sampled Date : Jul 08, 2024 2:14 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 002 2562 **Plot** A348,A34C/1 **Site** Gulf NLL2 Company Limited
Location : บ่อที่2 บ่อพักน้ำทิ้งก่อนปล่อยไปบ่อพัก
Date Analysis Commenced : Jul 08, 2024
Condition of Sample : Contained in 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							
Calcium	mg/L	0.03	0.05	235	No Standard	In-house method : STH 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Magnesium	mg/L	0.03	0.05	55.6	No Standard	In-house method : STH 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
SAR *		-	0.10	3.80	No Standard	In-house method : STH 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Sodium	mg/L	0.03	0.05	250	No Standard	In-house method : STH 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Water Testing							
Chloride *	mg/L	0.05	0.1	129	No Standard	In-house method : STH 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	3014	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen *	mg/L	-	0.1	6.8	≥4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (G)	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017)
Note : Dissolved Oxygen guideline set by Environmental Impact Assessment Report of Gulf NLL2 Co., Ltd
Sampling By : Paramet Sattayakun , Samart Khumphlee

Approved by: Sawitree N. — Sawitree Nonsangam, Manager

Analysis / Test Report

TESTING No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471200
Date Received : Jul 08, 2024
Date Reported : Jul 16, 2024
Report Number : 3032515-2

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

Approved by: Sawitree N. — Sawitree Nonsangam, Manager

Analysis / Test Report

TESTING
No 0042

Lot ID: 2471060
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3033914-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sample Number 2471060-1
Sampled Date Jul 08, 2024 10:14 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL_001_2566 **Plot** A.16 **Site** Michelin Siam Co.,Ltd
Date Analysis Commenced Jul 08, 2024
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Green, 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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	36	≤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) *		-	-	7.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	33.5	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2196	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	12	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ว-0011

Technical Management Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042

Lot ID: 2471060
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3033914-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

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 Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042

Lot ID: 2471050
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032380-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sample Number 2471050-1
Sampled Date Jul 04, 2024 10:02 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL_001_2554 **Plot** A-5-7 **Site** Nawaplastic Industrial Co.,Ltd
Date Analysis Commenced Jul 04, 2024
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	-	2.0	206	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	461	≤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) *		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.9	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	436	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	131	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wisan Kinunb ทะเบียนเลขที่ ว-323-ว-0019

Technical Management Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042

Lot ID: 2471050
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032380-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

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 Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042

Lot ID: 2471057
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032389-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sample Number 2471057-1
Sampled Date Jul 04, 2024 3:08 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL_010_2556 **Plot** A.18/2 **Site** Oil States Industries (Thailand) Ltd
Location Point 1
Date Analysis Commenced Jul 04, 2024
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	-	2.0	72.6	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	238	≤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) *		-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.7	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	360	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	151	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042

Lot ID: 2471057
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032389-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sampling By : Wisan Kinunb ทะเบียนเลขที่ ว-323-ว-0019

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 Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2471058
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032391-1

Sample Number : 2471058-1
Sampled Date : Jul 04, 2024 3:04 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 011 2556 Plot A 18/2 Site Oil States Industries (Thailand) Ltd.
Location : Point 2
Date Analysis Commenced : Jul 04, 2024
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	-	2.0	23.2	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	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	4	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.9	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	444	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	44	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Chonticha Suhongkoch, Scientist (3)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2471058
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032391-1

Sampling By : Wasan Knuanb

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: Chonticha Suhongkoch, Scientist (3)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2471185
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032421-1

Sample Number : 2471185-1
Sampled Date : Jul 04, 2024 3:24 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 002 2564 Plot A.55-9 Site S Kleber Chemical Co.,Ltd
Date Analysis Commenced : Jul 04, 2024
Condition of Sample : Contained in four 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	-	2.0	31.3	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	88	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand 4th ed.2004	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) *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.5	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	768	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	26	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Technical Management: Chonticha Suhongkoch, Scientist (3)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2471185
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032421-1

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)
Sampling By : Wasan Knuanb

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: Chonticha Suhongkoch, Scientist (3)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2471185
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032421-2

Sample Number : 2471185-1
Sampled Date : Jul 04, 2024 3:24 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 002 2564 Plot A.55-9 Site S Kleber Chemical Co.,Ltd
Date Analysis Commenced : Jul 05, 2024
Condition of Sample : Contained in four 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							
Ammonia Nitrogen	mg/L	0.05	0.1	<0.1	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong

Guideline :
Sampling By : Wasan Knuanb

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

Approved by: Chonticha Suhongkoch, Scientist (3)

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2471183
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032420-1

Sample Number : 2471183-1
Sampled Date : Jul 04, 2024 2:53 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 010 2554 Plot A52 Site SPC Star Plus Chemical Co.,Ltd.
Date Analysis Commenced : Jul 04, 2024
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	-	2.0	3.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand 4th ed.2004	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.7	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	[illegible]	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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

Technical Management: Chonticha Suhongkoch, Scientist (3)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042

Lot ID: 2471183
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3012420-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nongplalok Rd., Nongplalok, Bankha, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2471183-1
Sampled Date	Jul 04, 2024 2:53 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 010 2554 **Plot** A-52 **Site** SPC Star Plus Chemical Co.,Ltd
Date Analysis Commenced	Jul 05, 2024
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							
Ammonia Nitrogen	mg/L	0.05	0.1	0.1	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong

Guideline :
Sampling By : Wasan Kanunb
Remark :
LOD : Limit of Detection
"<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

Approved by Chontichak
Chontcha Sulongkach
Scientist (3)

Analysis / Test Report

TESTING
No 0042

Lot ID: 2471085
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3012408-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nongplalok Rd., Nongplalok, Bankha, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2471085-1
Sampled Date	Jul 04, 2024 11:10 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2558 **Plot** A-53-1 **Site** STAR BUF (Thailand) Co.,Ltd
Date Analysis Commenced	Jul 04, 2024
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 some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	79.2	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	220	≤400	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) *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.8	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	404	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	44	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.(Expansion and Remaining Area after July 2011)

Technical Management Chontichak
Chontcha Sulongkach
Scientist (3)

Approved by Dej Changchon
Senior Manager

Analysis / Test Report

TESTING
No 0042

Lot ID: 2471183
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3012420-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nongplalok Rd., Nongplalok, Bankha, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wasan Kanunb
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 Chontichak
Chontcha Sulongkach
Scientist (3)

Approved by Dej Changchon
Senior Manager

Analysis / Test Report

TESTING
No 0042

Lot ID: 2471085
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3012408-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nongplalok Rd., Nongplalok, Bankha, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Wasan Kanunb

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 Chontichak
Chontcha Sulongkach
Scientist (3)

Approved by Dej Changchon
Senior Manager

Analysis / Test Report

TESTING
No 0042

Lot ID: 2471055
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3012387-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nongplalok Rd., Nongplalok, Bankha, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2471055-1
Sampled Date	Jul 04, 2024 9:51 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 005 2556 **Plot** A-4 **Site** Starzone
Date Analysis Commenced	Jul 04, 2024
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	-	2.0	13.9	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	33	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.7	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	254	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wasan Kanunb

Technical Management Chontichak
Chontcha Sulongkach
Scientist (3)

Approved by Dej Changchon
Senior Manager

Analysis / Test Report

TESTING
No 0042

Lot ID: 2471055
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3012387-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nongplalok Rd., Nongplalok, Bankha, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

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 Chontichak
Chontcha Sulongkach
Scientist (3)

Approved by Dej Changchon
Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471186
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3034719-1

Page 1 of 2

Sample Number	2471186-1
Sampled Date	Jul 04, 2024 3:15 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2562 **Plot** A55-6 **Site** Starwood Chemical Co.,Ltd
Date Analysis Commenced	Jul 04, 2024
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	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤400	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analyses manual, Environmental Engineering Association of Thailand, 4th ed.,2004	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) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	956	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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

Technical Management Chontichak — Chonticha Suhongkoch, Scientist (1)
Approved by D. — Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471186
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3034719-1

Page 2 of 2

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)
Sampling By : Wasan Kmunb

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
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Technical Management Chontichak — Chonticha Suhongkoch, Scientist (1)
Approved by D. — Dej Changchon, Senior Manager

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471186
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3034719-2

Page 1 of 1

Sample Number	2471186-1
Sampled Date	Jul 04, 2024 3:15 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2562 **Plot** A55-6 **Site** Starwood Chemical Co.,Ltd
Date Analysis Commenced	Jul 05, 2024
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							
Ammonia Nitrogen	mg/L	0.05	0.1	0.2	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wasan Kmunb

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

Approved by Chontichak — Chonticha Suhongkoch, Scientist (1)

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471070
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032394-1

Page 1 of 2

Sample Number	2471070-1
Sampled Date	Jul 04, 2024 10:49 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 012 2556 **Plot** A-15A **Site** Siebel (Asia Pacific) Ltd
Date Analysis Commenced	Jul 04, 2024
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	-	2.0	74.1	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	166	≤400	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	408	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Chontichak — Chonticha Suhongkoch, Scientist (1)
Approved by D. — Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471070
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032394-1

Page 2 of 2

Sampling By : Wasan Kmunb

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 Chontichak — Chonticha Suhongkoch, Scientist (1)
Approved by D. — Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2471062
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3034698-1

Page 1 of 2

Sample Number	2471062-1
Sampled Date	Jul 08, 2024 11:49 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2567 **Plot** A55-3 **Site** Stronger Hydraulic (Thailand) Co.,Ltd
Location	
Date Analysis Commenced	Jul 08, 2024
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	-	2.0	13.3	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	73	≤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) *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.9	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	304	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	14	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chontichak — Chonticha Suhongkoch, Scientist (1)
Approved by D. — Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042
Lot ID: 2471062
Date Received : Jul 08, 2024
Date Reported : Jul 15, 2024
Report Number : 3034[illegible]-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sampling By : Surawit Nanpong ทะเบียนเลขที่ ว-323-ว-0011

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
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Technical Management Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042
Lot ID: 2471051
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032381-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sample Number	2471051-1
Sampled Date	Jul 04, 2024 11:00 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 006 2554 **Plot** A-36 **Site** T.I.T. International Co., Ltd
Date Analysis Commenced	Jul 04, 2024
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	-	2.0	74.6	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	230	≤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) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.3	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	410	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	58	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wasan Kmunb ทะเบียนเลขที่ ว-323-ว-0019

Technical Management Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042
Lot ID: 2471051
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032381-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

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 Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042
Lot ID: 2471069
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032393-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sample Number	2471069-1
Sampled Date	Jul 04, 2024 10:12 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 009 2556 **Plot** A-8/2 **Site** Thai Hemck Co., Ltd.
Date Analysis Commenced	Jul 04, 2024
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	-	2.0	14.4	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	67	≤400	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) *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	480	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	23	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.(Expansion and Remaining Area after July 2011)

Technical Management Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042
Lot ID: 2471069
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032393-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sampling By : Wasan Kmunb ทะเบียนเลขที่ ว-323-ว-0019

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 Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042
Lot ID: 2471187
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032422-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sample Number	2471187-1
Sampled Date	Jul 04, 2024 10:21 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 008 2554 **Plot** A-26 **Site** TOP Union Co., Ltd.
Date Analysis Commenced	Jul 04, 2024
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	-	2.0	35.7	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	117	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater analyses manual, Environmental Engineering Association of Thailand, 4th ed. 2004	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) *		-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	424	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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

Technical Management Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2471187
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032422-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wasan Kmunb ทะเบียนเลขที่ ว-323-ง-0019 , Kardhundit Krisuparanit ทะเบียนเลขที่ ว-204-ง-0001

Remark :
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"<" : 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: Chonticha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ง-9449
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-9442

Analysis / Test Report

TESTING No 0009

Lot ID: 2471187
Date Received : Jul 04, 2024
Date Reported : Jul 11, 2024
Report Number : 3032422-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2471187-1
Sampled Date	Jul 04, 2024 10:21 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 008 2554 **Plot** A-26 **Site** TOP Union Co., Ltd.
Date Analysis Commenced	Jul 05, 2024
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
Metals Testing							
Zinc	mg/L	0.003	0.005	0.08	≤5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wasan Kmunb ทะเบียนเลขที่ ว-323-ง-0019 , Kardhundit Krisuparanit ทะเบียนเลขที่ ว-204-ง-0001

Remark :
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"<" : 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: Sawitree Hodangam, Manager, ทะเบียนเลขที่ ว-204-ง-0007
Approved by: Kanokporn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ง-0004

Analysis / Test Report

TESTING No 0042

Lot ID: 2471056
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032388-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2471056-1
Sampled Date	Jul 04, 2024 1:48 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 008 2556 **Plot** A-15 **Site** TSN Wire Co.,Ltd.
Date Analysis Commenced	Jul 04, 2024
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	-	2.0	56.9	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	189	≤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) *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.5	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	510	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wasan Kmunb ทะเบียนเลขที่ ว-323-ง-0019

Technical Management: Chonticha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ง-9449
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2471056
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032388-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Remark :
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"<" : 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: Chonticha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ง-9449
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2471091
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032417-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2471091-1
Sampled Date	Jul 04, 2024 11:16 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 004 2559 **Plot** A53/5,A53/7 **Site** Umicore Autocat (Thailand) Co.,Ltd
Date Analysis Commenced	Jul 04, 2024
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	-	2.0	41.9	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	174	≤400	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) *		-	-	7.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.5	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	232	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	93	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.(Expansion and Remaining Area after July 2011)

Technical Management: Chonticha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ง-9449
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2471091
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032417-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Wasan Kmunb ทะเบียนเลขที่ ว-323-ง-0019

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: Chonticha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ง-9449
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-9442

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 2471195
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032481-1

Page 1 of 2

Sample Number	2471195-1
Sampled Date	Jul 04, 2024 10:28 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_005_2554 Plot A-22 Site Unity Industrial Co.,Ltd
Date Analysis Commenced	Jul 04, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	43.1	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	94	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	296	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	10	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wasan Kmunb ทะเบียนเลขที่ ว-323-ว-0019 , Kardbundit Kitsuepavanit ทะเบียนเลขที่ ว-204-ว-0001

Technical Management: Chontichak — Chontcha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by: D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 2471195
Date Received : Jul 04, 2024
Date Reported : Jul 10, 2024
Report Number : 3032481-1

Page 2 of 2

Remark :
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Technical Management: Chontichak — Chontcha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by: D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0009
Lot ID: 2471195
Date Received : Jul 04, 2024
Date Reported : Jul 11, 2024
Report Number : 3032481-2

Page 1 of 1

Sample Number	2471195-1
Sampled Date	Jul 04, 2024 10:28 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_005_2554 Plot A-22 Site Unity Industrial Co.,Ltd
Date Analysis Commenced	Jul 05, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.26	≤5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wasan Kmunb ทะเบียนเลขที่ ว-323-ว-0019 , Kardbundit Kitsuepavanit ทะเบียนเลขที่ ว-204-ว-0001

Remark :
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"<" : 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: Chanatt L. — Chanattagam Inchom, Section Head, ทะเบียนเลขที่ ว-204-ว-0008
Approved by: Kanoltkorn Anak, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 2484680
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065170-1

Page 1 of 2

Sample Number	2484680-1
Sampled Date	Aug 08, 2024 9:30 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2567 Plot A01 Site ACG CAPSULES (THAILAND) CO.,LTD
Date Analysis Commenced	Aug 08, 2024
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	-	2.0	17.3	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	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) *		-	-	6.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	212	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	18	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-9476

Technical Management: Chontichak — Chontcha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by: D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 2484680
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065170-1

Page 2 of 2

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
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Technical Management: Chontichak — Chontcha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by: D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

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Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 2484689
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065113-1

Page 1 of 2

Sample Number	2484689-1
Sampled Date	Aug 06, 2024 2:50 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_005_2557 Plot A34/2 Site Asian Unity Part Co.,Ltd
Date Analysis Commenced	Aug 06, 2024
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	-	2.0	12.6	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	51	≤400	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.8	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	592	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

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Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484689
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065113-1

Sampling By : Warunyoo Chomphalee

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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484691
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065116-1

Sample Number	2484691-1
Sampled Date	Aug 06, 2024 11:10 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	PIL 001 2559 **Plot** A29/1,A29/2 **Site** Beko Thai Co.,Ltd.
Location	Point 1
Date Analysis Commenced	Aug 06, 2024
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	-	2.0	144	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	358	≤400	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) *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	316	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	53	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484691
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065116-1

Sampling By : Warunyoo Chomphalee

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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484692
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065118-1

Sample Number	2484692-1
Sampled Date	Aug 06, 2024 11:20 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	PIL 002 2559 **Plot** A29/3 **Site** Beko Thai Co.,Ltd.
Location	Point 2
Date Analysis Commenced	Aug 06, 2024
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	-	2.0	15.7	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	95	≤400	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.1	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	252	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	19	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484692
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065118-1

Sampling By : Warunyoo Chomphalee

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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484684
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065102-1

Sample Number	2484684-1
Sampled Date	Aug 06, 2024 1:38 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 013 2556 **Plot** A-16A **Site** Bitech Automotive Co.,Ltd.
Date Analysis Commenced	Aug 06, 2024
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	-	2.0	61.5	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	195	≤400	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) *		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.7	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	260	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	43	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484684
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065102-1

Page 2 of 2

Sampling By : Wanunyoo Chumphalee

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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No.0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484702
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065130-1

Page 1 of 2

Sample Number	2484702-1
Sampled Date	Aug 08, 2024 3:45 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2556 **Plot** A-28 **Site** Caterpillar (Thailand) Limited
Location	Factory 1 Point 1
Date Analysis Commenced	Aug 08, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	187	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	475	≤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) *		-	-	6.7	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.7	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	416	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	92	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Chontichak — Chonticha Suhongkoch, Scientist (3)
Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484702
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065130-1

Page 2 of 2

Sampling By : Paramet Sattayakun, Samart Khumphlee

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: Chontichak — Chonticha Suhongkoch, Scientist (3)
Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484702
Date Received : Aug 08, 2024
Date Reported : Aug 16, 2024
Report Number : 3065130-2

Page 1 of 1

Sample Number	2484702-1
Sampled Date	Aug 08, 2024 3:45 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2556 **Plot** A-28 **Site** Caterpillar (Thailand) Limited
Location	Factory 1 Point 1
Date Analysis Commenced	Aug 09, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Lead	mg/L	0.0003	0.0005	0.003	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun, Samart Khumphlee

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: Saowitree N. — Saowitree Nirangam, Manager
Approved by: Kanokkorn Aree, Assistant General Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484703
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065132-1

Page 1 of 2

Sample Number	2484703-1
Sampled Date	Aug 08, 2024 4:00 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 004 2556 **Plot** A-28 **Site** Caterpillar (Thailand) Limited
Location	Factory 1 Point 2
Date Analysis Commenced	Aug 08, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	59.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	282	≤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	9	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.9	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	208	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	36	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Chontichak — Chonticha Suhongkoch, Scientist (3)
Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484703
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065132-1

Page 2 of 2

Sampling By : Paramet Sattayakun, Samart Khumphlee

Remark :
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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: Chontichak — Chonticha Suhongkoch, Scientist (3)
Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING No 0008

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484703
Date Received : Aug 08, 2024
Date Reported : Aug 16, 2024
Report Number : 3065132-2

Sample Number	2484703-1
Sampled Date	Aug 08, 2024 4:00 PM
Sample Description	Group 2 Customer Wastewater (WW-CT)
Contract ID	RIL 004 2556 Plot A-28 Site Caterpillar (Thailand) Limited
Location	Factory I Point 2
Date Analysis Commenced	Aug 09, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Lead	mg/L	0.0003	0.0005	0.002	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-9476 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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: Sawitree N. — Sawitree Nonangam, Manager, ทะเบียนเลขที่ ว-204-ว-0007
Approved by: Kamolthorn Areh — Kamolthorn Areh, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484705
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065137-1

Sample Number	2484705-1
Sampled Date	Aug 08, 2024 10:00 AM
Sample Description	Group 2 Customer Wastewater (WW-CT)
Contract ID	RIL 007 2556 Plot A-56/2 Site Caterpillar (Thailand) Limited
Location	Factory 2 Point 2
Date Analysis Commenced	Aug 08, 2024
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	-	2.0	40.9	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	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	<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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.5	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	308	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	29	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Chontichak — Chonticha Suthongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by: D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484705
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065137-1

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-9476 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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: Chontichak — Chonticha Suthongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-9449
Approved by: D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484705
Date Received : Aug 08, 2024
Date Reported : Aug 16, 2024
Report Number : 3065137-2

Sample Number	2484705-1
Sampled Date	Aug 08, 2024 10:00 AM
Sample Description	Group 2 Customer Wastewater (WW-CT)
Contract ID	RIL 007 2556 Plot A-56/2 Site Caterpillar (Thailand) Limited
Location	Factory 2 Point 2
Date Analysis Commenced	Aug 09, 2024
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
Metals Testing							
Lead	mg/L	0.0003	0.0005	0.0008	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-9476 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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: Sawitree N. — Sawitree Nonangam, Manager, ทะเบียนเลขที่ ว-204-ว-0007
Approved by: Kamolthorn Areh — Kamolthorn Areh, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484686
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065105-1

Sample Number	2484686-1
Sampled Date	Aug 06, 2024 2:40 PM
Sample Description	Group 2 Customer Wastewater (WW-CT)
Contract ID	RIL 002 2557 Plot A19/2 Site Chuhatsu (Thailand) Ltd
Date Analysis Commenced	Aug 06, 2024
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, no 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	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	<25	≤400	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) *		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.9	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	220	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	13	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Sreda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484686
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065105-1

Sampling By : Wanunya Chomphalee ทะเบียนเลขที่ ว-323-ว-0020

Remark :
LOD : Limit of Detection
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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: Photchana S. — Photchana Sreda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484685
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065103-1

Sample Number	2484685-1
Sampled Date	Aug 06, 2024 2:57 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2557 **Plot** A34/3 **Site** Delta Hydraulics (Thailand) Ltd.
Date Analysis Commenced	Aug 06, 2024
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	-	2.0	39.0	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	125	≤400	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) *		-	-	6.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	98	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	12	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.(Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4)
Approved by Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484685
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065103-1

Sampling By : Warunyoo Chumphalee

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 Photchana S. — Photchana Seeda, Scientist (4)
Approved by Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484715
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065162-1

Sample Number	2484715-1
Sampled Date	Aug 08, 2024 3:20 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2564 **Plot** A53/2 **Site** Electrolux Professional (Thailand) Co.,Ltd
Date Analysis Commenced	Aug 08, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	16.7	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	47	≤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) *		-	-	7.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.7	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	172	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	25	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun, Samart Khumphlee

Technical Management Chontichak — Chonticha Sutongkoch, Scientist (3)
Approved by Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484715
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065162-1

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 Chontichak — Chonticha Sutongkoch, Scientist (3)
Approved by Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484715
Date Received : Aug 08, 2024
Date Reported : Aug 16, 2024
Report Number : 3065162-2

Sample Number	2484715-1
Sampled Date	Aug 08, 2024 3:20 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2564 **Plot** A53/2 **Site** Electrolux Professional (Thailand) Co.,Ltd
Date Analysis Commenced	Aug 09, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.86	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun, Samart Khumphlee

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 Sawitree N. — Sawitree Honangam, Manager
Approved by Kanokkorn Arek, Assistant General Manager

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Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484709
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065152-1

Sample Number	2484709-1
Sampled Date	Aug 08, 2024 11:20 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_014_2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Gate 4
Date Analysis Commenced	Aug 08, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	114	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	336	≤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) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.2	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	420	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chontichak — Chonticha Sutongkoch, Scientist (3)
Approved by Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING No 0042

Lot ID: 2484709
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065152-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 2 of 2

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ท-9476 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ท-0084

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: Chontichak — Chontcha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ท-9449
Approved by: Day Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ท-9442

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Analysis / Test Report

TESTING No 0008

Lot ID: 2484709
Date Received : Aug 08, 2024
Date Reported : Aug 16, 2024
Report Number : 3065152-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 1 of 1

Sample Number : 2484709-1
Sampled Date : Aug 08, 2024 11:20 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 014 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location : Factory 2 Gate 4
Date Analysis Commenced : Aug 09, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.18	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ท-9476 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ท-0084

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: Sawitree N. — Sawitree Nonangam, Manager, ทะเบียนเลขที่ ว-204-ท-0007
Approved by: Kanokkorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ท-0004

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Analysis / Test Report

TESTING No 0042

Lot ID: 2484711
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065158-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 1 of 2

Sample Number : 2484711-1
Sampled Date : Aug 08, 2024 11:30 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 015 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location : Factory 2 Paint shop+DW
Date Analysis Commenced : Aug 08, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	32	≤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) *		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.1	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	772	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Chontichak — Chontcha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ท-9449
Approved by: Day Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ท-9442

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Analysis / Test Report

TESTING No 0042

Lot ID: 2484711
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065158-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 2 of 2

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ท-9476 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ท-0084

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: Chontichak — Chontcha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ท-9449
Approved by: Day Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ท-9442

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RIGHT SOLUTIONS RIGHT PARTNER

Analysis / Test Report

TESTING No 0009

Lot ID: 2484711
Date Received : Aug 08, 2024
Date Reported : Aug 16, 2024
Report Number : 3065158-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 1 of 1

Sample Number : 2484711-1
Sampled Date : Aug 08, 2024 11:30 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 015 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location : Factory 2 Paint shop+DW
Date Analysis Commenced : Aug 09, 2024
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
Metals Testing							
Zinc	mg/L	0.003	0.005	1.41	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ท-9476 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ท-0084

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: Sawitree N. — Sawitree Nonangam, Manager, ทะเบียนเลขที่ ว-204-ท-0007
Approved by: Kanokkorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ท-0004

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Analysis / Test Report

TESTING No 0042

Lot ID: 2484710
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065156-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 1 of 2

Sample Number : 2484710-1
Sampled Date : Aug 08, 2024 11:25 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 015 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location : Factory 2 Toilet/WSSS Testing/Q-Rate
Date Analysis Commenced : Aug 08, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	60.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	276	≤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) *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.0	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	600	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	45	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Chontichak — Chontcha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ท-9449
Approved by: Day Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ท-9442

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RIGHT SOLUTIONS RIGHT PARTNER

Analysis / Test Report

TESTING
No 0042
Lot ID: 2484710
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065156-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ฉ-9476 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ฉ-0084

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 Chontichak — Chonticha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ฉ-9449
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ฉ-9442

Analysis / Test Report

TESTING
No 0009
Lot ID: 2484710
Date Received : Aug 08, 2024
Date Reported : Aug 16, 2024
Report Number : 3065156-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2484710-1
Sampled Date	Aug 08, 2024 11:25 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_013_2554 **Plot** A-13 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Toilet/WSSS Testing/Q-Rate
Date Analysis Commenced	Aug 09, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.26	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ฉ-9476 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ฉ-0084

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 Sauithee N. — Sauitree Nonangam, Manager, ทะเบียนเลขที่ ว-204-ฉ-0007
Approved by — Kanokkorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ฉ-0004

Analysis / Test Report

TESTING
No 0042
Lot ID: 2484669
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065076-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2484669-1
Sampled Date	Aug 08, 2024 2:50 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2556 **Plot** A-34/1 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 3
Date Analysis Commenced	Aug 08, 2024
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	-	2.0	99.8	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	267	≤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) *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.8	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	308	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	101	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chontichak — Chonticha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ฉ-9449
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ฉ-9442

Analysis / Test Report

TESTING
No 0042
Lot ID: 2484669
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065076-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ฉ-9476

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 Chontichak — Chonticha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ฉ-9449
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ฉ-9442

Analysis / Test Report

TESTING
No 0042
Lot ID: 2484707
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065145-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2484707-1
Sampled Date	Aug 08, 2024 11:10 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_011_2554 **Plot** A-34A,A31A **Site** Electrolux Thailand Co.,Ltd
Location	Factory 1
Date Analysis Commenced	Aug 08, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	29.7	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	120	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.1	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	540	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	36	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chontichak — Chonticha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ฉ-9449
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ฉ-9442

Analysis / Test Report

TESTING
No 0042
Lot ID: 2484707
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065145-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ฉ-9476 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ฉ-0084

Remark :
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"<" : 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 Chontichak — Chonticha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ฉ-9449
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ฉ-9442

Analysis / Test Report

TESTING
No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484707
Date Received : Aug 08, 2024
Date Reported : Aug 16, 2024
Report Number : 3065145-2

Sample Number	2484707-1
Sampled Date	Aug 08, 2024 11:10 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 011 2554 **Plot** A 34A,A31A **Site** Electrolux Thailand Co.,Ltd
Location	Factory 1
Date Analysis Commenced	Aug 09, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.16	≤5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant
Sampling By : Paramet Sattayakun ว-323-ว-9476 , Samart Khumphlee ว-204-ว-0084

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 Sauwitree N. — Sauwitree Sirirangam, Manager, ว-204-ว-0007
Approved by Karolkorn Anel — Karolkorn Anel, Assistant General Manager, ว-204-ว-0054

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484687
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065107-1

Sample Number	2484687-1
Sampled Date	Aug 08, 2024 2:40 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2557 **Plot** A19/1 **Site** FITESACNC Co.,Ltd
Location	Point 1 (In front of the factory)
Date Analysis Commenced	Aug 08, 2024
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	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	<25	≤400	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	146	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Chontichak — Chonticha Sutongkoch, Scientist (3), ว-323-ว-9449
Approved by Dej Changchon, Senior Manager, ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484687
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065107-1

Sampling By : Paramet Sattayakun ว-323-ว-9476

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 Chontichak — Chonticha Sutongkoch, Scientist (3), ว-323-ว-9449
Approved by Dej Changchon, Senior Manager, ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484688
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065111-1

Sample Number	2484688-1
Sampled Date	Aug 08, 2024 2:30 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 004 2557 **Plot** A19/1 **Site** FITESACNC Co.,Ltd
Location	Point 2 (side of the factory)
Date Analysis Commenced	Aug 08, 2024
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	-	2.0	31.2	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	99	≤400	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) *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.7	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	188	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried 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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Chontichak — Chonticha Sutongkoch, Scientist (3), ว-323-ว-9449
Approved by Dej Changchon, Senior Manager, ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484688
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065111-1

Sampling By : Paramet Sattayakun ว-323-ว-9476

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 Chontichak — Chonticha Sutongkoch, Scientist (3), ว-323-ว-9449
Approved by Dej Changchon, Senior Manager, ว-323-ว-9442

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484668
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065075-1

Sample Number	2484668-1
Sampled Date	Aug 06, 2024 1:50 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 009 2554 **Plot** A-20-21 **Site** Fuburg Industrial Co.,Ltd
Date Analysis Commenced	Aug 06, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	<25	≤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) *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	256	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant
Sampling By : Wanunyoo Chomphulee ว-323-ว-0020

Technical Management Photchana S. — Photchana Sreda, Scientist (4), ว-323-ว-9446
Approved by Dej Changchon, Senior Manager, ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2484668
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065075-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 2484664
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065066-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number : 2484664-1
Sampled Date : Aug 06, 2024 10:07 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 002 2554 **Plot** A-25 **Site** Guardian Industries Rayong Co.,Ltd
Location : Point 1
Date Analysis Commenced : Aug 06, 2024
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, no 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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	<25	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.1	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	280	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 2484664
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065066-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Warunyoo Chomphalee

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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 2484663
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065064-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number : 2484663-1
Sampled Date : Aug 06, 2024 10:00 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 003 2554 **Plot** A-25 **Site** Guardian Industries Rayong Co.,Ltd
Location : Point 2
Date Analysis Commenced : Aug 06, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	47.8	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	141	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	324	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried 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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 2484663
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065064-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Warunyoo Chomphalee

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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 2484665
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065065-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number : 2484665-1
Sampled Date : Aug 06, 2024 10:16 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 004 2554 **Plot** A-25 **Site** Guardian Industries Rayong Co.,Ltd
Location : Point 3
Date Analysis Commenced : Aug 06, 2024
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	-	2.0	34.3	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	100	≤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) *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	428	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	25	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042

Lot ID: 2484665
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065065-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 1 of 1

Sampling By : Wanunya Ourphakee ext 323 x0020

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: Photchana S. — Photchana Seeda, Scientist (4), ext 323 x9446
Approved by: Dej Changchon, Senior Manager, ext 323 x9442

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Analysis / Test Report

TESTING
No 0042

Lot ID: 2484670
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065077-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 1 of 2

Sample Number	2484670-1
Sampled Date	Aug 08, 2024 10:50 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2556 **Plot** A-24 **Site** GULF JP NLL Company Ltd
Date Analysis Commenced	Aug 08, 2024
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	-	2.0	31	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	42	≤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) *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.6	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1700	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ext 323 x9476

Technical Management: Chontichak — Chonticha Suthongkoch, Scientist (3), ext 323 x9449
Approved by: Dej Changchon, Senior Manager, ext 323 x9442

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Analysis / Test Report

TESTING
No 0042

Lot ID: 2484670
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065077-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 2 of 2

Remark :
LOD : Limit of Detection
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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: Chontichak — Chonticha Suthongkoch, Scientist (3), ext 323 x9449
Approved by: Dej Changchon, Senior Manager, ext 323 x9442

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Analysis / Test Report

TESTING
No 0042

Lot ID: 2484694
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065123-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 1 of 2

Sample Number	2484694-1
Sampled Date	Aug 08, 2024 2:10 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2562 **Plot** A34B,A34C/1 **Site** Gulf NLL2 Company Limited
Location	บ่อพัก 1 บ่อน้ำเสียก่อนส่ง
Date Analysis Commenced	Aug 08, 2024
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	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤400	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	776	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Chontichak — Chonticha Suthongkoch, Scientist (3), ext 323 x9449
Approved by: Dej Changchon, Senior Manager, ext 323 x9442

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Analysis / Test Report

TESTING
No 0042

Lot ID: 2484694
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065123-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 2 of 2

Sampling By : Paramet Sattayakun ext 323 x9476

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: Chontichak — Chonticha Suthongkoch, Scientist (3), ext 323 x9449
Approved by: Dej Changchon, Senior Manager, ext 323 x9442

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Analysis / Test Report

TESTING
No 0042

Lot ID: 2484718
Date Received : Aug 08, 2024
Date Reported : Aug 15, 2024
Report Number : 3065150-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 1 of 1

Sample Number	2484718-1
Sampled Date	Aug 08, 2024 2:00 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2562 **Plot** A34B,A34C/1 **Site** Gulf NLL2 Company Limited
Location	บ่อพัก 2 บ่อน้ำเสียก่อนส่ง
Date Analysis Commenced	Aug 08, 2024
Condition of Sample	Contained in 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	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
pH (on site) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	0.1	≤1.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	33.6	≤40	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2210	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	15	≤50	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resources and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017)
Sampling By : Paramet Sattayakun ext 323 x9476

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: Chontichak — Chonticha Suthongkoch, Scientist (3), ext 323 x9449
Approved by: Dej Changchon, Senior Manager, ext 323 x9442

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0009
Lot ID: 2484718
Date Received : Aug 08, 2024
Date Reported : Aug 16, 2024
Report Number : 3065160-2

Sample Number	2484718-1
Sampled Date	Aug 08, 2024 2:00 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_002_2562 **Plot** A14B,A14C/1 **Site** Gulf NLL2 Company Limited
Location	จุดที่2 [illegible]
Date Analysis Commenced	Aug 08, 2024
Condition of Sample	Contained in 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							
Calcium	mg/L	0.03	0.05	246	No Standard	In-house method : STH 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Magnesium	mg/L	0.03	0.05	37.0	No Standard	In-house method : STH 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
SAR *		-	0.10	4.45	No Standard	In-house method : STH 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Sodium	mg/L	0.03	0.05	283	No Standard	In-house method : STH 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Water Testing							
Chloride *	mg/L	0.05	0.1	0.99	No Standard	In-house method : STH 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	2759	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen *	mg/L	-	0.1	6.7	≥4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (G)	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial part set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017)
Sampling By : Paramet Sattayakun

Remark :
LOD : Limit of Detection

Approved by Siriluk P.
Siriluk Bunnak
Section Head

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0009
Lot ID: 2484718
Date Received : Aug 08, 2024
Date Reported : Aug 16, 2024
Report Number : 3065160-2

"<" : 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

Approved by Siriluk P.
Siriluk Bunnak
Section Head

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2484679
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065167-1

Sample Number	2484679-1
Sampled Date	Aug 06, 2024 9:32 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2566 **Plot** A16 **Site** Michelin Siam Co.,Ltd
Date Analysis Commenced	Aug 06, 2024
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	-	2.0	5.9	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	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) *		-	-	7.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.9	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2640	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	19	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wanunyoo Oumphakee [illegible] ว-323-ค-0020

Technical Management Photchana S.
Photchana Seeda
Scientist (4)
[illegible] ว-323-ค-9446

Approved by Dej Changchon
Senior Manager
[illegible] ว-323-ค-9442

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2484679
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065167-1

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 Photchana S.
Photchana Seeda
Scientist (4)
[illegible] ว-323-ค-9446

Approved by Dej Changchon
Senior Manager
[illegible] ว-323-ค-9442

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2484666
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065073-1

Sample Number	2484666-1
Sampled Date	Aug 06, 2024 10:36 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2554 **Plot** A5-7 **Site** Nawaplastic Industrial Co.,Ltd.
Date Analysis Commenced	Aug 06, 2024
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 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	-	2.0	74.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	247	≤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) *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	404	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	111	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wanunyoo Oumphakee [illegible] ว-323-ค-0020

Technical Management Photchana S.
Photchana Seeda
Scientist (4)
[illegible] ว-323-ค-9446

Approved by Dej Changchon
Senior Manager
[illegible] ว-323-ค-9442

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2484666
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065073-1

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 Photchana S.
Photchana Seeda
Scientist (4)
[illegible] ว-323-ค-9446

Approved by Dej Changchon
Senior Manager
[illegible] ว-323-ค-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484675
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065095-1

Sample Number	2484675-1
Sampled Date	Aug 06, 2024 2:05 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 010 2556 Plot A-18/2 Site Oil States Industries (Thailand) Ltd
Location	Point 1
Date Analysis Commenced	Aug 06, 2024
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	-	2.0	67.4	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	224	≤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) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.1	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	436	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	91	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible]-323-[illegible]-9446
Approved by: Dej Changchon, Senior Manager, [illegible]-323-[illegible]-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484675
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065095-1

Sampling By : Warunyoo Chumphalee [illegible]-323-[illegible]-0020

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
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Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible]-323-[illegible]-9446
Approved by: Dej Changchon, Senior Manager, [illegible]-323-[illegible]-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484677
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065096-1

Sample Number	2484677-1
Sampled Date	Aug 06, 2024 2:00 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 011 2556 Plot A-18/2 Site Oil States Industries (Thailand) Ltd
Location	Point 2
Date Analysis Commenced	Aug 06, 2024
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	-	2.0	65.3	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	249	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	356	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	151	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible]-323-[illegible]-9446
Approved by: Dej Changchon, Senior Manager, [illegible]-323-[illegible]-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484677
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065096-1

Sampling By : Warunyoo Chumphalee [illegible]-323-[illegible]-0020

Remark :
LOD : Limit of Detection
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Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025
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Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible]-323-[illegible]-9446
Approved by: Dej Changchon, Senior Manager, [illegible]-323-[illegible]-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484699
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065366-1

Sample Number	2484699-1
Sampled Date	Aug 06, 2024 2:25 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2564 Plot A55-9 Site S.Kleher Chemical Co.,Ltd
Date Analysis Commenced	Aug 06, 2024
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	-	2.0	136	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	66	≤400	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed. 2004	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) *		-	-	8.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	176	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible]-323-[illegible]-9446
Approved by: Dej Changchon, Senior Manager, [illegible]-323-[illegible]-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484699
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065366-1

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)
Sampling By : Warunyoo Chumphalee [illegible]-323-[illegible]-0020

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible]-323-[illegible]-9446
Approved by: Dej Changchon, Senior Manager, [illegible]-323-[illegible]-9442

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Banklua Nongfalok Rd., Nongfalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484699
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065166-2

Sample Number	2484699-1
Sampled Date	Aug 06, 2024 2:25 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2564 **Plot** A.55-9 **Site** S Kleber Chemical Co.,Ltd
Date Analysis Commenced	Aug 07, 2024
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							
Ammonia Nitrogen	mg/L	0.05	0.1	46.2	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Warunyoo Chumphalee

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

Approved by: Photchana S.
Photchana Seeda
Scientist (4)

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Banklua Nongfalok Rd., Nongfalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484696
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065123-1

Sample Number	2484696-1
Sampled Date	Aug 06, 2024 1:50 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 010 2554 **Plot** A-52 **Site** SPC Star Plus Chemical Co.,Ltd
Date Analysis Commenced	Aug 06, 2024
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	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed.,2004	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) *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	35.5	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	656	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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

Technical Management: Photchana S.
Photchana Seeda
Scientist (4)

Approved by: Dej Chungchon
Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Banklua Nongfalok Rd., Nongfalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484696
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065123-1

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Warunyoo Chumphalee

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: Photchana S.
Photchana Seeda
Scientist (4)

Approved by: Dej Chungchon
Senior Manager

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Banklua Nongfalok Rd., Nongfalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484696
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065123-2

Sample Number	2484696-1
Sampled Date	Aug 06, 2024 1:50 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 010 2554 **Plot** A-52 **Site** SPC Star Plus Chemical Co.,Ltd
Date Analysis Commenced	Aug 07, 2024
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	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.05	0.1	0.1	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Warunyoo Chumphalee

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

Approved by: Photchana S.
Photchana Seeda
Scientist (4)

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Banklua Nongfalok Rd., Nongfalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484690
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065114-1

Sample Number	2484690-1
Sampled Date	Aug 06, 2024 3:15 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2558 **Plot** A 53-1 **Site** STAR BUT (Thailand) Co.,Ltd
Date Analysis Commenced	Aug 06, 2024
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	-	2.0	90.7	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	268	≤400	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) *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.4	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	296	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	66	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Ramarong Area after July 2011)

Technical Management: Photchana S.
Photchana Seeda
Scientist (4)

Approved by: Dej Chungchon
Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Banklua Nongfalok Rd., Nongfalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484690
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065114-1

Sampling By : Warunyoo Chumphalee

Remark :
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"<" : 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: Photchana S.
Photchana Seeda
Scientist (4)

Approved by: Dej Chungchon
Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484673
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065078-1

Sample Number	2484673-1
Sampled Date	Aug 06, 2024 11:35 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2556 **Plot** A-4 **Site** Siamese
Date Analysis Commenced	Aug 06, 2024
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Orange, some odour, a lot of 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	-	2.0	160	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	98	≤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) *		-	-	9.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	37.7	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2248	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	74	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Warunyoo Chomphalee

Technical Management Photchana S. — Photchana Seeda, Scientist (4)
Approved by — Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484673
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065078-1

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 Photchana S. — Photchana Seeda, Scientist (4)
Approved by — Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484698
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065126-1

Sample Number	2484698-1
Sampled Date	Aug 06, 2024 2:15 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2562 **Plot** A55-6 **Site** Starwood Chemical Co., Ltd
Date Analysis Commenced	Aug 06, 2024
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, no 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	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analyses manual Environmental Engineering Association of Thailand, 4th ed.,2004	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) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.5	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	972	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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

Technical Management Photchana S. — Photchana Seeda, Scientist (4)
Approved by — Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484698
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065126-1

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)
Sampling By : Warunyoo Chomphalee

Remark :
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"<" : 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 Photchana S. — Photchana Seeda, Scientist (4)
Approved by — Dej Changchon, Senior Manager

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484698
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065126-2

Sample Number	2484698-1
Sampled Date	Aug 06, 2024 2:15 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2562 **Plot** A55-6 **Site** Starwood Chemical Co., Ltd
Date Analysis Commenced	Aug 07, 2024
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, no solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.05	0.1	<0.1	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Warunyoo Chomphalee

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

Approved by Photchana S. — Photchana Seeda, Scientist (4)

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2484683
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065100-1

Sample Number	2484683-1
Sampled Date	Aug 06, 2024 3:32 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 012 2556 **Plot** A-15A **Site** Stebel (Asia Pacific) Ltd
Date Analysis Commenced	Aug 06, 2024
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	-	2.0	35.3	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	128	≤400	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.9	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	232	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4)
Approved by — Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 2484683
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 1065100-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Warunyoo Chumphalee ทะเบียนเลขที่ ว-323-ว-0020

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2484681
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 1065174-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2484681-1
Sampled Date	Aug 06, 2024 2:28 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002_2567 **Plot** A55-3 **Site** Stronger Hydraulic (Thailand) Co.,Ltd
Location	ธนาคาร
Date Analysis Commenced	Aug 06, 2024
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	-	2.0	21.3	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	82	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	248	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	20	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2484681
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 1065174-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Warunyoo Chumphalee ทะเบียนเลขที่ ว-323-ว-0020

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2484667
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 1065074-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2484667-1
Sampled Date	Aug 06, 2024 3:23 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 006_2554 **Plot** A36 **Site** T.I.T International Co.,Ltd
Date Analysis Commenced	Aug 06, 2024
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	-	2.0	155	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	365	≤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) *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.9	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	512	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	94	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Warunyoo Chumphalee ทะเบียนเลขที่ ว-323-ว-0020

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2484667
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 1065074-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2484682
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 1065099-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2484682-1
Sampled Date	Aug 06, 2024 10:49 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 009_2556 **Plot** A4/2 **Site** Thai Hamck Co.,Ltd
Date Analysis Commenced	Aug 06, 2024
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	-	2.0	139	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	55	≤400	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) *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	224	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	19	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.(Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2484682
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065099-1

Sampling By : Warunyoo Chimphalee ทะเบียนเลขที่ ว-323-ว-0020

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: Dej Chungchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2484700
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065128-1

Sample Number : 2484700-1
Sampled Date : Aug 06, 2024 10:55 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL_008_2554 **Plot** A-26 **Site** TOP Union Co.,Ltd
Date Analysis Commenced : Aug 06, 2024
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 no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	36.0	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	111	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand 4th ed. 2004	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	220	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	33	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: Dej Chungchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2484700
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065128-1

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Warunyoo Chimphalee ทะเบียนเลขที่ ว-323-ว-0020 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: Dej Chungchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No.0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2484700
Date Received : Aug 06, 2024
Date Reported : Aug 14, 2024
Report Number : 3065129-2

Sample Number : 2484700-1
Sampled Date : Aug 06, 2024 10:55 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL_008_2554 **Plot** A-26 **Site** TOP Union Co.,Ltd
Date Analysis Commenced : Aug 07, 2024
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 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	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Warunyoo Chimphalee ทะเบียนเลขที่ ว-323-ว-0020 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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: Saowitree N. — Saowitree Nonangam, Manager, ทะเบียนเลขที่ ว-204-ว-0007
Approved by: Kanokkorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2484674
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065080-1

Sample Number : 2484674-1
Sampled Date : Aug 06, 2024 9:37 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL_008_2556 **Plot** A-15 **Site** TSN Wire Co.,Ltd
Date Analysis Commenced : Aug 06, 2024
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	-	2.0	67.4	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	196	≤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) *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	476	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Warunyoo Chimphalee ทะเบียนเลขที่ ว-323-ว-0020

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: Dej Chungchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2484674
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065080-1

Remark :
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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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-9446
Approved by: Dej Chungchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2484693
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065119-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sample Number	2484693-1
Sampled Date	Aug 06, 2024 3:06 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_004_2559 **Plot** A53/5,A53/7 **Site** Umicore Autocat (Thailand) Co.,Ltd
Date Analysis Commenced	Aug 06, 2024
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample container 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	-	2.0	30.8	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	128	≤400	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) *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	144	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	45	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ง-9446
Approved by Dej Changchon, Senior Manager, [illegible] ว-323-ง-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2484693
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065119-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sampling By : Warunyoo Chomphulee [illegible] ว-323-ง-0020

Remark :
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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 Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ง-9446
Approved by Dej Changchon, Senior Manager, [illegible] ว-323-ง-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2484708
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065149-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sample Number	2484708-1
Sampled Date	Aug 06, 2024 3:47 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_005_2554 **Plot** A-22 **Site** Unity Industrial Co.,Ltd
Date Analysis Commenced	Aug 06, 2024
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 no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	18.2	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	131	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	228	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	34	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Warunyoo Chomphulee [illegible] ว-323-ง-0020 , Samart Khumphlee [illegible] ว-204-ง-0084

Technical Management Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ง-9446
Approved by Dej Changchon, Senior Manager, [illegible] ว-323-ง-9442

Analysis / Test Report

TESTING No 0042

Lot ID: 2484708
Date Received : Aug 06, 2024
Date Reported : Aug 13, 2024
Report Number : 3065149-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

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 Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ง-9446
Approved by Dej Changchon, Senior Manager, [illegible] ว-323-ง-9442

Analysis / Test Report

TESTING No 0009

Lot ID: 2484708
Date Received : Aug 06, 2024
Date Reported : Aug 14, 2024
Report Number : 3065149-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sample Number	2484708-1
Sampled Date	Aug 06, 2024 3:47 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_005_2554 **Plot** A-22 **Site** Unity Industrial Co.,Ltd
Date Analysis Commenced	Aug 07, 2024
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 no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.69	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Warunyoo Chomphulee [illegible] ว-323-ง-0020 , Samart Khumphlee [illegible] ว-204-ง-0084

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 Sauwitree N. — Sauwitree Nonsangam, Manager, [illegible] ว-204-ง-0007
Approved by Kanokhorn Anek, Assistant General Manager, [illegible] ว-204-ง-0004

Analysis / Test Report

TESTING No 0042

Lot ID: 2496691
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3093150-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sample Number	2496691-1
Sampled Date	Sep 09, 2024 11:40 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2567 **Plot** A-01 **Site** ACG CAPSULES (THAILAND) CO.,LTD
Date Analysis Commenced	Sep 09, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	28	≤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) *		-	-	6.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.7	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	216	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	16	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongjaeng [illegible] ว-323-ง-0030

Technical Management Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ง-0028
Approved by Dej Changchon, Senior Manager, [illegible] ว-323-ง-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2496691
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3093150-1

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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2496701
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089958-1

Sample Number : 2496701-1
Sampled Date : Sep 09, 2024 2:50 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 005_2557 Plot A34/2 Site Asian Unity Part Co.,Ltd
Date Analysis Commenced : Sep 09, 2024
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	-	2.0	9.8	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	36	≤400	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.4	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	528	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2496701
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089958-1

Sampling By : Pitthaya Thongluang

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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2496703
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : 3089970-1

Sample Number : 2496703-1
Sampled Date : Sep 05, 2024 9:35 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 001_2559 Plot A29/1,A29/2 Site Beko Thai Co.,Ltd
Location : Point 1
Date Analysis Commenced : Sep 05, 2024
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	-	2.0	96.5	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	326	≤400	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	340	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	43	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2496703
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : 3089970-1

Sampling By : Surawit Narapong

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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 2496704
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : 3089974-1

Sample Number : 2496704-1
Sampled Date : Sep 05, 2024 9:50 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 002_2559 Plot A29/3 Site Beko Thai Co.,Ltd
Location : Point 2
Date Analysis Commenced : Sep 05, 2024
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	-	2.0	33.6	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	160	≤400	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) *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.5	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	224	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	21	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042
Lot ID: 2496704
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : 3089974-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ล-0011

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ล-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ล-0001

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Analysis / Test Report

TESTING No 0042
Lot ID: 2496696
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089938-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2496696-1
Sampled Date	Sep 09, 2024 10:57 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 013 2556 Plot A-16A Site Bitech Automotive Co.,Ltd.
Date Analysis Commenced	Sep 09, 2024
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	-	2.0	43.8	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	165	≤400	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) *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.8	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	268	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	25	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ล-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ล-0001

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Analysis / Test Report

TESTING No 0042
Lot ID: 2496696
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089938-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-ล-0030

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ล-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ล-0001

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Analysis / Test Report

TESTING No 0042
Lot ID: 2496712
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089997-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2496712-1
Sampled Date	Sep 09, 2024 2:14 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2556 Plot A 28 Site Caterpillar (Thailand) Limited
Location	Factory 1 Point 1
Date Analysis Commenced	Sep 09, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	120	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	297	≤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	9	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	6.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.8	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	284	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	49	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ล-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ล-0001

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Analysis / Test Report

TESTING No.0042
Lot ID: 2496712
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089997-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-ล-0030 , Pattarapol Sawangpaiam ทะเบียนเลขที่ ว-204-ล-0002

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ล-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ล-0001

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Analysis / Test Report

TESTING No 0008
Lot ID: 2496712
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089997-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2496712-1
Sampled Date	Sep 09, 2024 2:14 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2556 Plot A-28 Site Caterpillar (Thailand) Limited
Location	Factory 1 Point 1
Date Analysis Commenced	Sep 10, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Lead	mg/L	0.0003	0.0005	0.003	≤0.2	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-ล-0030 , Pattarapol Sawangpaiam ทะเบียนเลขที่ ว-204-ล-0002

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: Sauithee N. — Sauithee Nonsngam, Manager, ทะเบียนเลขที่ ว-204-ล-0007
Approved by: Karotham Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ล-0004

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Analysis / Test Report

TESTING
No 0042

Lot ID: 2496713
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : J090001-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2496713-1
Sampled Date	Sep 09, 2024 2:30 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 004 2556 **Plot** A-28 **Site** Caterpillar (Thailand) Limited
Location	Factory 1 Point 2
Date Analysis Commenced	Sep 09, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	326	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	119	≤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) *		-	-	6.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.7	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	208	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	23	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-0028

Approved by D. Changchon
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING
No 0042

Lot ID: 2496713
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : J090001-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Pitthaya Thongluang ทะเบียนเลขที่ ว-323-ว-0030 , Pattarapol Sawangpitam ทะเบียนเลขที่ ว-204-ว-0002

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 Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-0028

Approved by D. Changchon
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING
No 0009

Lot ID: 2496713
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : J090001-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2496713-1
Sampled Date	Sep 09, 2024 2:30 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 004 2556 **Plot** A-28 **Site** Caterpillar (Thailand) Limited
Location	Factory 1 Point 2
Date Analysis Commenced	Sep 10, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Lead	mg/L	0.0003	0.0005	0.003	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongluang ทะเบียนเลขที่ ว-323-ว-0030 , Pattarapol Sawangpitam ทะเบียนเลขที่ ว-204-ว-0002

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 Saowitree N.
Saowitree Nonangum
Manager
ทะเบียนเลขที่ ว-204-ว-0007

Approved by Karnthorn Anek
Karnthorn Anek
Assistant General Manager
ทะเบียนเลขที่ ว-204-ว-0004

Analysis / Test Report

TESTING
No 0042

Lot ID: 2496715
Date Received : Sep 12, 2024
Date Reported : Sep 18, 2024
Report Number : J090035-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2496715-1
Sampled Date	Sep 12, 2024 9:52 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 007 2556 **Plot** A-56/2 **Site** Caterpillar (Thailand) Limited
Location	Factory 2 Point 2
Date Analysis Commenced	Sep 12, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	133	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	257	≤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) *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.3	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	452	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	119	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-0028

Approved by D. Changchon
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING
No 0042

Lot ID: 2496715
Date Received : Sep 12, 2024
Date Reported : Sep 18, 2024
Report Number : J090035-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Wasan Kmunb ทะเบียนเลขที่ ว-323-ว-0019 , Kandbundit Ketsuparanit ทะเบียนเลขที่ ว-204-ว-0001

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 Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-0028

Approved by D. Changchon
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING
No 0009

Lot ID: 2496715
Date Received : Sep 12, 2024
Date Reported : Sep 18, 2024
Report Number : J090035-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	2496715-1
Sampled Date	Sep 12, 2024 9:52 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 007 2556 **Plot** A-56/2 **Site** Caterpillar (Thailand) Limited
Location	Factory 2 Point 2
Date Analysis Commenced	Sep 13, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Lead	mg/L	0.0003	0.0005	0.002	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wasan Kmunb ทะเบียนเลขที่ ว-323-ว-0019 , Kandbundit Ketsuparanit ทะเบียนเลขที่ ว-204-ว-0001

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 Saowitree N.
Saowitree Nonangum
Manager
ทะเบียนเลขที่ ว-204-ว-0007

Approved by Karnthorn Anek
Karnthorn Anek
Assistant General Manager
ทะเบียนเลขที่ ว-204-ว-0004

Analysis / Test Report

TESTING
No 0042
Lot ID: 2496698
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089948-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number: 2496698-1
Sampled Date: Sep 09, 2024 3:40 PM
Sample Description: Group 2 : Customer Wastewater (WW-CT)
Contract ID: RIL 002 2557 **Plot** A19/2 **Site** Chuhatsu (Thailand) Ltd
Date Analysis Commenced: Sep 09, 2024
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	-	2.0	63.0	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	296	≤400	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) *		-	-	7.7	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	33.2	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	380	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	118	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4)
Approved by D. — Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042
Lot ID: 2496698
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089948-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Prithaya Thongtaeng

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 Photchana S. — Photchana Seeda, Scientist (4)
Approved by D. — Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042
Lot ID: 2496723
Date Received : Sep 12, 2024
Date Reported : Sep 18, 2024
Report Number : 3093145-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number: 2496723-1
Sampled Date: Sep 12, 2024 10:13 AM
Sample Description: Group 2 : Customer Wastewater (WW-CT)
Contract ID: RIL 001 2564 **Plot** A53/2 **Site** Electrolux Professional (Thailand) Co.,Ltd
Date Analysis Commenced: Sep 12, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	<25	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.7	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	126	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	10	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wasan Kmunb ว-323-ต-0019 , Kardbundit Kittipapavant ว-204-ต-0001

Technical Management Photchana S. — Photchana Seeda, Scientist (4)
Approved by D. — Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042
Lot ID: 2496723
Date Received : Sep 12, 2024
Date Reported : Sep 18, 2024
Report Number : 3093145-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

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 Photchana S. — Photchana Seeda, Scientist (4)
Approved by D. — Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0008
Lot ID: 2496723
Date Received : Sep 12, 2024
Date Reported : Sep 18, 2024
Report Number : 3091145-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number: 2496723-1
Sampled Date: Sep 12, 2024 10:13 AM
Sample Description: Group 2 : Customer Wastewater (WW-CT)
Contract ID: RIL 001 2564 **Plot** A53/2 **Site** Electrolux Professional (Thailand) Co.,Ltd
Date Analysis Commenced: Sep 13, 2024
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
Metals Testing							
Zinc	mg/L	0.003	0.005	0.76	≤5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wasan Kmunb ว-323-ต-0019 , Kardbundit Kittipapavant ว-204-ต-0001

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 Saowitree N. — Saowitree Nirangam, Manager
Approved by Karakorn Anek — Karakorn Anek, Assistant General Manager

Analysis / Test Report

TESTING
No 0042
Lot ID: 2496717
Date Received : Sep 11, 2024
Date Reported : Sep 17, 2024
Report Number : 3093123-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number: 2496717-1
Sampled Date: Sep 11, 2024 3:35 PM
Sample Description: Group 2 : Customer Wastewater (WW-CT)
Contract ID: RIL 012 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location: Factory 2 Canteen/Toilet
Date Analysis Commenced: Sep 11, 2024
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	-	2.0	194	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	346	≤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) *		-	-	6.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.0	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	492	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	57	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Photchana S. — Photchana Seeda, Scientist (4)
Approved by D. — Dej Changchon, Senior Manager

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496717
Date Received : Sep 11, 2024
Date Reported : Sep 17, 2024
Report Number : 3093123-1

Page 1 of 1

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-จ-0051 , Kardbundit Kitsupavanit ทะเบียนเลขที่ ว-204-จ-0001

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-จ-0028

Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-จ-0001

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ALS

Analysis / Test Report

TESTING
No 0008

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location: WHA RIL

Lot ID: 2496717
Date Received : Sep 11, 2024
Date Reported : Sep 18, 2024
Report Number : 3093123-2

Page 1 of 1

Sample Number	2496717-1
Sampled Date	Sep 11, 2024 3:35 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 032 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Canteen/Toilet
Date Analysis Commenced	Sep 12, 2024
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	0.29	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-จ-0051 , Kardbundit Kitsupavanit ทะเบียนเลขที่ ว-204-จ-0001

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: Chanatt L. — Chanattagam Inchom, Section Head, ทะเบียนเลขที่ ว-204-จ-0008

Approved by: Kanokkorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-จ-0004

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496720
Date Received : Sep 11, 2024
Date Reported : Sep 17, 2024
Report Number : 3093132-1

Page 1 of 2

Sample Number	2496720-1
Sampled Date	Sep 11, 2024 3:15 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 014 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Gate 4
Date Analysis Commenced	Sep 11, 2024
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 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	-	2.0	117	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	296	≤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	9	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	6.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.1	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	472	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	70	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-จ-0028

Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496720
Date Received : Sep 11, 2024
Date Reported : Sep 17, 2024
Report Number : 3093132-1

Page 2 of 2

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-จ-0051 , Kardbundit Kitsupavanit ทะเบียนเลขที่ ว-204-จ-0001

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-จ-0028

Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

TESTING
No 0008

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496720
Date Received : Sep 11, 2024
Date Reported : Sep 18, 2024
Report Number : 3093132-2

Page 1 of 1

Sample Number	2496720-1
Sampled Date	Sep 11, 2024 3:15 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 014 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Gate 4
Date Analysis Commenced	Sep 12, 2024
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 a lot of turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.16	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-จ-0051 , Kardbundit Kitsupavanit ทะเบียนเลขที่ ว-204-จ-0001

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: Chanatt L. — Chanattagam Inchom, Section Head, ทะเบียนเลขที่ ว-204-จ-0008

Approved by: Kanokkorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-จ-0004

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496721
Date Received : Sep 11, 2024
Date Reported : Sep 17, 2024
Report Number : 3093135-1

Page 1 of 2

Sample Number	2496721-1
Sampled Date	Sep 11, 2024 3:24 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 013 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Toilet/WSSS Testing/Q-Rate
Date Analysis Commenced	Sep 11, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	77.9	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	227	≤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) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.0	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	640	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	51	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-จ-0028

Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

TESTING No 0042

Lot ID: 2496721
Date Received : Sep 11, 2024
Date Reported : Sep 17, 2024
Report Number : 3093135-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ง-0051 , Kardbundit Kitrupavanit ทะเบียนเลขที่ ว-204-ง-0001

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ง-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

Analysis / Test Report

TESTING No.0009

Lot ID: 2496721
Date Received : Sep 11, 2024
Date Reported : Sep 18, 2024
Report Number : 3093135-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number : 2496721-1
Sampled Date : Sep 11, 2024 3:24 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 013 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location : Factory 2 Toilet/WSSS Testing/Q-Rate
Date Analysis Commenced : Sep 12, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.25	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ง-0051 , Kardbundit Kitrupavanit ทะเบียนเลขที่ ว-204-ง-0001

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: Chanatt L. — Chanattagarn Imchom, Section Head, ทะเบียนเลขที่ ว-204-ง-0008
Approved by: Kanokkorn Anel, Assistant General Manager, ทะเบียนเลขที่ ว-204-ง-0004

Analysis / Test Report

TESTING No 0042

Lot ID: 2496683
Date Received : Sep 11, 2024
Date Reported : Sep 17, 2024
Report Number : 3089886-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number : 2496683-1
Sampled Date : Sep 11, 2024 4:19 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 001 2556 **Plot** A-34/1 **Site** Electrolux Thailand Co.,Ltd
Location : Factory 3
Date Analysis Commenced : Sep 11, 2024
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	-	2.0	71.2	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	165	≤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) *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	376	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	67	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ง-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 2496683
Date Received : Sep 11, 2024
Date Reported : Sep 17, 2024
Report Number : 3089886-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ง-0051

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ง-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 2496718
Date Received : Sep 11, 2024
Date Reported : Sep 17, 2024
Report Number : 3093126-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number : 2496718-1
Sampled Date : Sep 11, 2024 3:02 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 011 2554 **Plot** A-34A,A31A **Site** Electrolux Thailand Co.,Ltd
Location : Factory 1
Date Analysis Commenced : Sep 11, 2024
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	-	2.0	53.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	163	≤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	9	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	740	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	49	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ง-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 2496718
Date Received : Sep 11, 2024
Date Reported : Sep 17, 2024
Report Number : 3093126-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ง-0051 , Kardbundit Kitrupavanit ทะเบียนเลขที่ ว-204-ง-0001

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ง-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

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Analysis / Test Report

TESTING
No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496718
Date Received : Sep 11, 2024
Date Reported : Sep 18, 2024
Report Number : J093126-2

Sample Number	2496718-1
Sampled Date	Sep 11, 2024 3:02 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 011 2554 **Plot** A-34A,A31A **Site** Electrolux Thailand Co.,Ltd
Location	Factory 1
Date Analysis Commenced	Sep 12, 2024
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	0.14	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun [illegible] v-323-a-0051 , Kanitkundit Kitsupavanit [illegible] v-204-a-0001

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: Chanatt L. — Chanattagarn Inchom, Section Head, [illegible] v-204-a-0008
Approved by: Kanokkorn Anet, Assistant General Manager, [illegible] v-204-a-0004

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496699
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : J089951-1

Sample Number	2496699-1
Sampled Date	Sep 09, 2024 3:07 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2557 **Plot** A19/1 **Site** FITESACNC Co.,Ltd
Location	Point 1 (In front of the factory)
Date Analysis Commenced	Sep 09, 2024
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	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤400	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	22.1	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	154	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.(Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible] v-323-a-0028
Approved by: Dej Chungchon, Senior Manager, [illegible] v-323-a-0001

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496699
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : J089951-1

Sampling By : Pitthaya Thongtaeng [illegible] v-323-a-0030

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible] v-323-a-0028
Approved by: Dej Chungchon, Senior Manager, [illegible] v-323-a-0001

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496700
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : J089955-1

Sample Number	2496700-1
Sampled Date	Sep 09, 2024 3:00 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 004 2557 **Plot** A19/1 **Site** FITESACNC Co.,Ltd
Location	Point 2 (side of the factory)
Date Analysis Commenced	Sep 09, 2024
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	-	2.0	62.7	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	203	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	8	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.4	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	328	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	62	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.(Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible] v-323-a-0028
Approved by: Dej Chungchon, Senior Manager, [illegible] v-323-a-0001

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496700
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : J089955-1

Sampling By : Pitthaya Thongtaeng [illegible] v-323-a-0030

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible] v-323-a-0028
Approved by: Dej Chungchon, Senior Manager, [illegible] v-323-a-0001

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496682
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : J087682-1

Sample Number	2496682-1
Sampled Date	Sep 05, 2024 10:45 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 009 2554 **Plot** A-20-21 **Site** Fuburg Industrial Co.,Ltd
Date Analysis Commenced	Sep 05, 2024
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	-	2.0	3.5	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	25	≤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) *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.3	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	174	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surasit Nanpong [illegible] v-323-a-0011

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible] v-323-a-0028
Approved by: Dej Chungchon, Senior Manager, [illegible] v-323-a-0001

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496682
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : 3089882-1

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nongkalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496678
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : 3089872-1

Sample Number 2496678-1
Sampled Date Sep 05, 2024 10:05 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 002 2554 **Plot** A-25 **Site** Guardian Industries Rayong Co.,Ltd
Location Point 1
Date Analysis Commenced Sep 05, 2024
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	-	2.0	4.8	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	25	≤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) *		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	33.2	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	106	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nongkalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496678
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : 3089872-1

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ว-0011

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nongkalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496677
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : 3089862-1

Sample Number 2496677-1
Sampled Date Sep 05, 2024 10:55 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 003 2554 **Plot** A-25 **Site** Guardian Industries Rayong Co.,Ltd
Location Point 2
Date Analysis Commenced Sep 05, 2024
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	-	2.0	75.9	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	216	≤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	8	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	280	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nongkalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496677
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : 3089862-1

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ว-0011

Remark :
LOD : Limit of Detection
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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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nongkalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496679
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : 3089874-1

Sample Number 2496679-1
Sampled Date Sep 05, 2024 10:12 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 004 2554 **Plot** A-25 **Site** Guardian Industries Rayong Co.,Ltd
Location Point 3
Date Analysis Commenced Sep 05, 2024
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 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	-	2.0	29.0	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	137	≤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) *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.4	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	370	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried 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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING
No 0042

Lot ID: 2496679
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : JB89874-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Surawit Narapong [illegible] 323-ห-0011

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible] 323-ห-0028
Approved by: Dej Changchon, Senior Manager, [illegible] 323-ห-0001

Analysis / Test Report

TESTING
No 0042

Lot ID: 2496684
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : JB89894-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number : 2496684-1
Sampled Date : Sep 05, 2024 10:20 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 002 2556 **Plot** A-24 **Site** GULF JP NLL Company Ltd
Date Analysis Commenced : Sep 05, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	37	≤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) *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.1	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1670	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong [illegible] 323-ห-0011

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible] 323-ห-0028
Approved by: Dej Changchon, Senior Manager, [illegible] 323-ห-0001

Analysis / Test Report

TESTING
No 0042

Lot ID: 2496684
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : JB89894-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible] 323-ห-0028
Approved by: Dej Changchon, Senior Manager, [illegible] 323-ห-0001

Analysis / Test Report

TESTING
No 0042

Lot ID: 2496706
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : JB89982-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number : 2496706-1
Sampled Date : Sep 05, 2024 1:50 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 001 2562 **Plot** A34B,A34C/1 **Site** Gulf NLL2 Company Limited
Location : [illegible]
Date Analysis Commenced : Sep 05, 2024
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	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	<25	≤400	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) *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.6	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	226	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible] 323-ห-0028
Approved by: Dej Changchon, Senior Manager, [illegible] 323-ห-0001

Analysis / Test Report

TESTING
No 0042

Lot ID: 2496706
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : JB89982-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Surawit Narapong [illegible] 323-ห-0011

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible] 323-ห-0028
Approved by: Dej Changchon, Senior Manager, [illegible] 323-ห-0001

Analysis / Test Report

TESTING
No 0042

Lot ID: 2496724
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : JB91140-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number : 2496724-1
Sampled Date : Sep 05, 2024 2:00 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 002 2562 **Plot** A34B,A34C/1 **Site** Gulf NLL2 Company Limited
Location : [illegible]
Date Analysis Commenced : Sep 05, 2024
Condition of Sample : Contained in 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	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	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
Residual Free Chlorine *	mg/L	-	0.1	0.2	≤1.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.7	≤40	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1520	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	8	≤50	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resources and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017)
Note : Dissolved Oxygen guideline set by Environmental Impact Assessment Report of Gulf NLL2 Co., Ltd.
Sampling By : Surawit Narapong [illegible] 323-ห-0011 , Samart Khumphlee [illegible] 204-ห-0084

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible] 323-ห-0028
Approved by: Dej Changchon, Senior Manager, [illegible] 323-ห-0001

ALS

Analysis / Test Report

TESTING
No 0008

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496724
Date Received : Sep 05, 2024
Date Reported : Sep 13, 2024
Report Number : J093140-2

Sample Number	2496724-1
Sampled Date	Sep 05, 2024 2:00 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_002_2562 **Plot** A348,A34C/1 **Site** Gulf NLL2 Company Limited
Location	จุดที่2 น้ำเสียก่อนออกโรงไฟฟ้า
Date Analysis Commenced	Sep 05, 2024
Condition of Sample	Contained in 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							
Calcium	mg/L	0.03	0.05	176	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Magnesium	mg/L	0.03	0.05	31.7	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
SAR *		-	0.10	4.01	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Sodium	mg/L	0.03	0.05	220	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Water Testing							
Chloride *	mg/L	0.05	0.1	124	No Standard	In-house method : STM 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	2245	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2510 B	Rayong
Dissolved Oxygen *	mg/L	-	0.1	7.2	≥4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (G)	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017)
Note : Dissolved Oxygen guideline set by Environmental Impact Assessment Report of Gulf NLL2 Co., Ltd.

Sampling By : Surasit Narapong , Samart Khumphlee

Approved by Sawitree N.
Sawitree Norangam
Manager

ALS

Analysis / Test Report

TESTING
No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496724
Date Received : Sep 05, 2024
Date Reported : Sep 13, 2024
Report Number : J093140-2

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

Approved by Sawitree N.
Sawitree Norangam
Manager

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496690
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : J093148-1

Sample Number	2496690-1
Sampled Date	Sep 09, 2024 9:20 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2566 **Plot** 4.16 **Site** Kichwin Sam Co.,Ltd
Date Analysis Commenced	Sep 09, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	<25	≤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) *		-	-	6.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.2	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1890	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pithaya Thongtaeng ทะเบียนเลขที่ ว-323-ว-0030

Technical Management Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-0028

Approved by D
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496690
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : J093148-1

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 Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-0028

Approved by D
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496680
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : J089875-1

Sample Number	2496680-1
Sampled Date	Sep 09, 2024 9:45 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2554 **Plot** A-5-7 **Site** Nawaplastic Industrial Co.,Ltd
Date Analysis Commenced	Sep 09, 2024
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	-	2.0	125	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	252	≤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) *		-	-	7.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.5	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	400	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	94	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pithaya Thongtaeng ทะเบียนเลขที่ ว-323-ว-0030

Technical Management Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-0028

Approved by D
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496680
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : J089875-1

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
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Technical Management Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-0028

Approved by D
Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

Lot ID: 2496687
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : 3089911-1

Sample Number	2496687-1
Sampled Date	Sep 05, 2024 3:35 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 010 2556 **Plot** A-18/2 **Site** Oil States Industries (Thailand) Ltd.
Location	Point 1
Date Analysis Commenced	Sep 05, 2024
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	-	2.0	67.9	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	242	≤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) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	308	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	72	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Photchana S.
Photchana Seeda
Scientist (4)

Approved by D. Changchon
Dej Changchon
Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

Lot ID: 2496687
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : 3089911-1

Sampling By : Surawit Narayong

Remark :
LOD : Limit of Detection
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Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025
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Technical Management Photchana S.
Photchana Seeda
Scientist (4)

Approved by D. Changchon
Dej Changchon
Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

Lot ID: 2496688
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : 3089917-1

Sample Number	2496688-1
Sampled Date	Sep 05, 2024 3:40 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 011 2556 **Plot** A-18/2 **Site** Oil States Industries (Thailand) Ltd
Location	Point 2
Date Analysis Commenced	Sep 05, 2024
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	-	2.0	67.8	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	288	≤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) *		-	-	7.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.1	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	460	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	73	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Photchana S.
Photchana Seeda
Scientist (4)

Approved by D. Changchon
Dej Changchon
Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

Lot ID: 2496688
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : 3089917-1

Sampling By : Surawit Narayong

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
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Technical Management Photchana S.
Photchana Seeda
Scientist (4)

Approved by D. Changchon
Dej Changchon
Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

Lot ID: 2496710
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3093147-1

Sample Number	2496710-1
Sampled Date	Sep 09, 2024 10:15 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2564 **Plot** A55-9 **Site** S.Kleber Chemical Co.,Ltd
Date Analysis Commenced	Sep 09, 2024
Condition of Sample	Contained in 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	-	2.0	10.5	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	36	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater analysis manual. Environmental Engineering Association of Thailand, 4th ed. 2004	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.6	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	480	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	10	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Technical Management Photchana S.
Photchana Seeda
Scientist (4)

Approved by D. Changchon
Dej Changchon
Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

Lot ID: 2496710
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3093147-1

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)
Sampling By : Arthaya Thongluang

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 Photchana S.
Photchana Seeda
Scientist (4)

Approved by D. Changchon
Dej Changchon
Senior Manager

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496710
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3093147-2

Sample Number	2496710-1
Sampled Date	Sep 09, 2024 10:15 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2564 Plot A55-9 Site S Kieber Chemical Co.,Ltd
Date Analysis Commenced	Sep 10, 2024
Condition of Sample	Contained in 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							
Ammonia Nitrogen	mg/L	0.05	0.1	0.3	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant
Sampling By : Pithaya Thongtaeng

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

Approved by Photchana S.
Photchana Seeda
Scientist (4)

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2496708
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089984-1

Sample Number	2496708-1
Sampled Date	Sep 09, 2024 3:55 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 010 2554 Plot A52 Site SPC Star Plus Chemical Co.,Ltd
Date Analysis Commenced	Sep 09, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed 2004	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) *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.2	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	592	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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

Technical Management: Photchana S.
Photchana Seeda
Scientist (4)
ทน.0ยผแบบที่ ว-323 ว-0028

Approved by: D. Changchon
Dej Changchon
Senior Manager
ทน.0ยผแบบที่ ว-323 ว-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2496708
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089984-1

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pithaya Thongtaeng ทน.0ยผแบบที่ ว-323 ว-0030

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: Photchana S.
Photchana Seeda
Scientist (4)
ทน.0ยผแบบที่ ว-323 ว-0028

Approved by: D. Changchon
Dej Changchon
Senior Manager
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Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496708
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089984-2

Sample Number	2496708-1
Sampled Date	Sep 09, 2024 3:55 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 010 2554 Plot A52 Site SPC Star Plus Chemical Co.,Ltd
Date Analysis Commenced	Sep 10, 2024
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							
Ammonia Nitrogen	mg/L	0.05	0.1	0.2	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pithaya Thongtaeng

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

Approved by Photchana S.
Photchana Seeda
Scientist (4)

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222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2496702
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089959-1

Sample Number	2496702-1
Sampled Date	Sep 09, 2024 10:30 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2558 Plot A53-1 Site STAR BUT (Thailand) Co.,Ltd
Date Analysis Commenced	Sep 09, 2024
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	-	2.0	49.8	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	208	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	8	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	292	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S.
Photchana Seeda
Scientist (4)
ทน.0ยผแบบที่ ว-323 ว-0028

Approved by: D. Changchon
Dej Changchon
Senior Manager
ทน.0ยผแบบที่ ว-323 ว-0001

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P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 2496702
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089959-1

Sampling By : Pithaya Thongtaeng ทน.0ยผแบบที่ ว-323 ว-0030

Remark :
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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: Photchana S.
Photchana Seeda
Scientist (4)
ทน.0ยผแบบที่ ว-323 ว-0028

Approved by: D. Changchon
Dej Changchon
Senior Manager
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Analysis / Test Report

TESTING
No 0042

Lot ID: 2496685

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nongplalok Rd., Nongplalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : X089896-1

Page 1 of 2

Sample Number	2496685-1
Sampled Date	Sep 09, 2024 10:00 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 005 2556 Mat A-4 Site Starzone
Date Analysis Commenced	Sep 09, 2024
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	-	2.0	14.3	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	50	≤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	8	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	7.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.8	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	294	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	19	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pithaya Thongtaeng

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042

Lot ID: 2496685

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nongplalok Rd., Nongplalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : X089896-1

Page 2 of 2

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Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042

Lot ID: 2496709

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nongplalok Rd., Nongplalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : X089896-1

Page 1 of 2

Sample Number	2496709-1
Sampled Date	Sep 09, 2024 10:10 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2562 Mat A55-6 Site Starwood Chemical Co.,Ltd
Date Analysis Commenced	Sep 09, 2024
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	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤400	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed. 2004	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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	876	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pithaya Thongtaeng

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042

Lot ID: 2496709

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nongplalok Rd., Nongplalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : X089896-1

Page 2 of 2

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.(Expansion and Remaining Area after July 2011)
Sampling By : Pithaya Thongtaeng

Remark :
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Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

Lot ID: 2496709

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nongplalok Rd., Nongplalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : X089896-2

Page 1 of 1

Sample Number	2496709-1
Sampled Date	Sep 09, 2024 10:10 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2562 Mat A55-6 Site Starwood Chemical Co.,Ltd
Date Analysis Commenced	Sep 10, 2024
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							
Ammonia Nitrogen	mg/L	0.05	0.1	0.1	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pithaya Thongtaeng

Remark :
LOD : Limit of Detection
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Approved by: Photchana S. — Photchana Seeda, Scientist (4)

Analysis / Test Report

TESTING
No 0042

Lot ID: 2496695

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nongplalok Rd., Nongplalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : X089896-1

Page 1 of 2

Sample Number	2496695-1
Sampled Date	Sep 09, 2024 10:55 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 012 2556 Mat A-15A Site Siebel (Asia Pacific) Ltd
Date Analysis Commenced	Sep 09, 2024
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	-	2.0	38.5	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	141	≤400	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	8	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5520 B	Rayong
pH (on site) *		-	-	7.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	352	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	35	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.(Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496695
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089916-1

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-ว-0030

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Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

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TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496692
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3093152-1

Sample Number	2496692-1
Sampled Date	Sep 09, 2024 10:25 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002_2567 Plot A55-3 Site Stronger Hydraulic (Thailand) Co., Ltd.
Location	[illegible]
Date Analysis Commenced	Sep 09, 2024
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	-	2.0	20.3	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	67	≤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) *		-	-	7.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	324	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	20	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

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TESTING
No 0042

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P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496692
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3093152-1

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-ว-0030

Remark :
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Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

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TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496681
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : 3085878-1

Sample Number	2496681-1
Sampled Date	Sep 05, 2024 3:55 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 006_2554 Plot A-36 Site T.T.T. International Co., Ltd
Date Analysis Commenced	Sep 05, 2024
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	-	2.0	128	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	349	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	352	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	75	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Sampling By : Suravit Hansprong ทะเบียนเลขที่ ว-323-ว-0011

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496681
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : 3085878-1

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496694
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089931-1

Sample Number	2496694-1
Sampled Date	Sep 09, 2024 9:30 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 009_2556 Plot A-8/2 Site Thai Hermit Co., Ltd
Date Analysis Commenced	Sep 09, 2024
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	-	2.0	8.7	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	41	≤400	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) *		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.7	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	276	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	14	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496694
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : J089931-1

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-ว-0030

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496711
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : J089989-1

Sample Number	2496711-1
Sampled Date	Sep 09, 2024 11:05 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 008 2554 **Plot** A-26 **Site** TOP Union Co.,Ltd
Date Analysis Commenced	Sep 09, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	69.9	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	247	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed. 2004	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) *		-	-	7.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.0	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	292	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	47	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496711
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : J089989-1

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-ว-0030 , Patturapol Sawangsatam ทะเบียนเลขที่ ว-204-ว-0002

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

TESTING No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496711
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : J089989-2

Sample Number	2496711-1
Sampled Date	Sep 09, 2024 11:05 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 008 2554 **Plot** A-26 **Site** TOP Union Co.,Ltd
Date Analysis Commenced	Sep 10, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.07	≤5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-ว-0030 , Patturapol Sawangsatam ทะเบียนเลขที่ ว-204-ว-0002

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 Sawitree N. — Sawitree Nesangam, Manager, ทะเบียนเลขที่ ว-204-ว-0007
Approved by Karolkorn Aroh — Karolkorn Aroh, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

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Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496686
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : J089903-1

Sample Number	2496686-1
Sampled Date	Sep 05, 2024 3:26 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 008 2556 **Plot** 4-15 **Site** TSN Wire Co.,Ltd
Date Analysis Commenced	Sep 05, 2024
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	-	2.0	54.1	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	175	≤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
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	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 Dissolved Solids Dried at 180 degree C	mg/L	-	5	356	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	23	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ว-0011

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496686
Date Received : Sep 05, 2024
Date Reported : Sep 11, 2024
Report Number : J089903-1

Remark :
LOD : Limit of Detection
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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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496705
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089977-1

Page 1 of 2

Sample Number	2496705-1
Sampled Date	Sep 09, 2024 10:40 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_004_2559 **Plot** A53/5,A53/7 **Site** Umicore Autocat (Thailand) Co.,Ltd
Date Analysis Commenced	Sep 09, 2024
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	-	2.0	30.1	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	169	≤400	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) *		-	-	7.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.9	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	292	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	133	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 2496705
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3089977-1

Page 2 of 2

Sampling By : Pitthaya Thongtaeng

Remark :
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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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Random Check
Project Location : WHA RIL

Lot ID: 24100910
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3097628-1

Page 1 of 2

Sample Number	24100910-1
Sampled Date	Sep 09, 2024 1:50 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_003_2567 **Plot** A53/3 **Site** YAOKUN MACHINERY COMPANY LIMITED
Date Analysis Commenced	Sep 09, 2024
Condition of Sample	Contained in one amber glass bottle, two glass vials and seven 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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	7	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	6	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 F	Rayong
Cyanide as CN	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
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed.,2004	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) *		-	-	6.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong

Technical Management: Chontichak — Chonticha Suhongkoh, Scientist (3)
Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Random Check
Project Location : WHA RIL

Lot ID: 24100910
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3097628-1

Page 2 of 2

Sample Number	24100910-1
Sampled Date	Sep 09, 2024 1:50 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_003_2567 **Plot** A53/3 **Site** YAOKUN MACHINERY COMPANY LIMITED
Date Analysis Commenced	Sep 09, 2024
Condition of Sample	Contained in one amber glass bottle, two glass vials and seven 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							
Phenol	mg/L	0.005	0.01	<0.010	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5530 D	Rayong
Temperature *	Degree C	-	-	32.4	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2108	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	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 : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng, Pattarapol Sawangpaiam

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: Chontichak — Chonticha Suhongkoh, Scientist (3)
Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Random Check
Project Location : WHA RIL

Lot ID: 24100910
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3097628-2

Page 1 of 2

Sample Number	24100910-1
Sampled Date	Sep 09, 2024 1:50 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_003_2567 **Plot** A53/3 **Site** YAOKUN MACHINERY COMPANY LIMITED
Date Analysis Commenced	Sep 10, 2024
Condition of Sample	Contained in one amber glass bottle, two glass vials and seven 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	0.004	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.02	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.008	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.001	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.0003	0.0005	0.66	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Technical Management: Sawitree N. — Sawitree Nonangam, Manager
Approved by: Karotkorn Anek, Assistant General Manager

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Analysis / Test Report

TESTING
No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Random Check
Project Location : WHA RIL

Lot ID: 24100910
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : 3097628-2

Page 2 of 2

Sample Number	24100910-1
Sampled Date	Sep 09, 2024 1:50 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_003_2567 **Plot** A53/3 **Site** YAOKUN MACHINERY COMPANY LIMITED
Date Analysis Commenced	Sep 10, 2024
Condition of Sample	Contained in one amber glass bottle, two glass vials and seven 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							
Mercury *	mg/L	0.0001	0.0005	<0.0005	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.65	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	≤0.02	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Trivalent Chromium *	mg/L	-	0.01	0.05	≤0.75	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	0.26	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng, Pattarapol Sawangpaiam

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: Sawitree N. — Sawitree Nonangam, Manager
Approved by: Karotkorn Anek, Assistant General Manager

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Analysis / Test Report

TESTING No 0009

Lot ID: 24100910
Date Received : Sep 09, 2024
Date Reported : Sep 16, 2024
Report Number : J097628-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Random Check
Project Location : WHA RIL

Sample Number 24100910-1
Sampled Date Sep 09, 2024 1:50 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 003 2567 **Plot** A53/3 **Site** YAOKUN MACHINERY COMPANY LIMITED
Date Analysis Commenced Sep 10, 2024
Condition of Sample Contained in one amber glass bottle, two glass vials and seven 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	1.10	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Water Testing							
Fluoride as F *	mg/L	0.06	0.2	0.7	≤5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pinthaya Thongkaeng , Pattarapol Sawangsalum

Remark :
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"<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Approved by Sawitree N.
Sawitree Noinangam
Manager

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Analysis / Test Report

TESTING No 0042

Lot ID: 24111181
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : J121294-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sample Number 24111181-1
Sampled Date Oct 08, 2024 4:03 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 001 2567 **Plot** A01 **Site** ACG CAPSULES (THAILAND) CO.,LTD
Date Analysis Commenced Oct 08, 2024
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Blue, 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	-	2.0	40.7	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	188	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	34.2	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	296	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	115	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ว-0011

Technical Management: Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-0028

Approved by: Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

TESTING No 0042

Lot ID: 24111181
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : J121294-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

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: Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-0028

Approved by: Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

TESTING No 0042

Lot ID: 24111197
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : J121218-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sample Number 24111197-1
Sampled Date Oct 08, 2024 10:11 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 005 2557 **Plot** A34/2 **Site** Asian Unity Part Co.,Ltd
Date Analysis Commenced Oct 08, 2024
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	-	2.0	7.5	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	48	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.3	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	468	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-0028

Approved by: Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

TESTING No 0042

Lot ID: 24111197
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : J121218-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ว-0011

Remark :
LOD : Limit of Detection
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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: Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-0028

Approved by: Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

TESTING No 0042

Lot ID: 24111199
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : J121241-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sample Number 24111199-1
Sampled Date Oct 07, 2024 2:55 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 001 2559 **Plot** A29/1,A29/2 **Site** Seko Thai Co.,Ltd
Location Point 1
Date Analysis Commenced Oct 07, 2024
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	-	2.0	68.9	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	171	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	9	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.2	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	432	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	42	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ว-0028

Approved by: Dej Changchon
Senior Manager
ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111199
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121241-1

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323 จ-0051

Remark :
LOD : Limit of Detection
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Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323 จ-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 จ-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111200
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121243-1

Sample Number : 24111200-1
Sampled Date : Oct 07, 2024 3:10 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 002 2559 **Plot** A29/3 **Site** Beko Thai Co.,Ltd
Location : Point 2
Date Analysis Commenced : Oct 07, 2024
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	-	2.0	37.3	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023 part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	102	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.5	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	372	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	29	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323 จ-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 จ-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111200
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121243-1

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323 จ-0051

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
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Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323 จ-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 จ-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111192
Date Received : Oct 04, 2024
Date Reported : Oct 11, 2024
Report Number : 3121192-1

Sample Number : 24111192-1
Sampled Date : Oct 04, 2024 11:00 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 013 2556 **Plot** A-16A **Site** Bitech Automotive Co.,Ltd
Date Analysis Commenced : Oct 04, 2024
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	-	2.0	77.9	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	213	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.9	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	316	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	52	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323 จ-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 จ-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111192
Date Received : Oct 04, 2024
Date Reported : Oct 11, 2024
Report Number : 3121192-1

Sampling By : Samorn Chuenkao ทะเบียนเลขที่ ว-323 จ-0005

Remark :
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Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323 จ-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 จ-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111214
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121263-1

Sample Number : 24111214-1
Sampled Date : Oct 08, 2024 3:10 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 004 2556 **Plot** A-28 **Site** Caterpillar (Thailand) Limited
Location : Factory 1 Point 2
Date Analysis Commenced : Oct 08, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	41.5	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	164	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	8	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.4	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	220	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	36	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323 จ-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 จ-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111214
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121261-1

Sampling By : Surawet Nanpong [illegible] ว-323-ว-0011 , Samart Khumphlee [illegible] ว-204-ว-0084

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ว-0028
Approved by: Dej Changchan, Senior Manager, [illegible] ว-323-ว-0001

Analysis / Test Report

TESTING No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111214
Date Received : Oct 08, 2024
Date Reported : Oct 15, 2024
Report Number : 3121261-2

Sample Number : 24111214-1
Sampled Date : Oct 08, 2024 3:30 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL_004 2556 **Plot** A-28 **Site** Caterpillar (Thailand) Limited
Location : Factory 1 Point 2
Date Analysis Commenced : Oct 09, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Lead	mg/L	0.0003	0.0005	0.002	≤0.2	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawet Nanpong [illegible] ว-323-ว-0011 , Samart Khumphlee [illegible] ว-204-ว-0084

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: Chanatt L. — Chanattagarn Imchom, Section Head, [illegible] ว-204-ว-0008
Approved by: Kanokkorn Anek, Assistant General Manager, [illegible] ว-204-ว-0004

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111215
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121264-1

Sample Number : 24111215-1
Sampled Date : Oct 07, 2024 1:50 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 006 2556 **Plot** A-56/1 **Site** Caterpillar (Thailand) Limited
Location : Factory 2 Point 1
Date Analysis Commenced : Oct 07, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	82.4	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	251	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	8	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.4	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	408	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	76	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ว-0028
Approved by: Dej Changchan, Senior Manager, [illegible] ว-323-ว-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111215
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121264-1

Sampling By : Paramet Sattayakun [illegible] ว-323-ว-0051 , Samart Khumphlee [illegible] ว-204-ว-0084

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ว-0028
Approved by: Dej Changchan, Senior Manager, [illegible] ว-323-ว-0001

Analysis / Test Report

TESTING No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111215
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121264-2

Sample Number : 24111215-1
Sampled Date : Oct 07, 2024 1:50 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL_006 2556 **Plot** A-56/1 **Site** Caterpillar (Thailand) Limited
Location : Factory 2 Point 1
Date Analysis Commenced : Oct 08, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Lead	mg/L	0.0003	0.0005	0.002	≤0.2	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun [illegible] ว-323-ว-0051 , Samart Khumphlee [illegible] ว-204-ว-0084

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: Chanatt L. — Chanattagarn Imchom, Section Head, [illegible] ว-204-ว-0008
Approved by: Kanokkorn Anek, Assistant General Manager, [illegible] ว-204-ว-0004

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111216
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121266-1

Sample Number : 24111216-1
Sampled Date : Oct 07, 2024 2:05 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL_007 2556 **Plot** A-56/2 **Site** Caterpillar (Thailand) Limited
Location : Factory 2 Point 2
Date Analysis Commenced : Oct 07, 2024
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 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	-	2.0	96.7	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	268	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.7	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	436	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	122	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ว-0028
Approved by: Dej Changchan, Senior Manager, [illegible] ว-323-ว-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24111216
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121266-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Paramet Saltayakun ทะเบียนเลขที่ ว-323-ว-0051 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No 0000

Lot ID: 24111216
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121266-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111216-1
Sampled Date	Oct 07, 2024 2:05 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 007 2556 **Plot** A-56/2 **Site** Caterpillar (Thailand) Limited
Location	Factory 2 Point 2
Date Analysis Commenced	Oct 08, 2024
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 a lot of turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Lead	mg/L	0.0003	0.0005	0.003	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Saltayakun ทะเบียนเลขที่ ว-323-ว-0051 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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 Chanatt L. — Chanattagarn Imchom, Section Head, ทะเบียนเลขที่ ว-204-ว-0008
Approved by Kanakorn Arel, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

Analysis / Test Report

TESTING No 0042

Lot ID: 24111194
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121195-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111194-1
Sampled Date	Oct 08, 2024 10:01 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2557 **Plot** A19/2 **Site** Chuhatsu (Thailand) Ltd
Date Analysis Commenced	Oct 08, 2024
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	-	2.0	8.1	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	41	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.0	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	144	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	12	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24111194
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121195-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Surawit Nanpong ทะเบียนเลขที่ ว-323-ว-0011

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24111193
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121194-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111193-1
Sampled Date	Oct 08, 2024 10:20 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2557 **Plot** A34/3 **Site** Delta Hydraulics (Thailand) Ltd.
Date Analysis Commenced	Oct 08, 2024
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, 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	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.0	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	67	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24111193
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121194-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Surawit Nanpong ทะเบียนเลขที่ ว-323-ว-0011

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

ALS

TESTING
No 0042
Lot ID: 24111231
Date Received : Oct 07, 2024
Date Reported : Oct 16, 2024
Report Number : 3121288-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111231-1
Sampled Date	Oct 07, 2024 2:20 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2564 **Plot** A53/2 **Site** Electrolux Professional (Thailand) Co.,Ltd
Date Analysis Commenced	Oct 07, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	13.9	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	33	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.8	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	210	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	13	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ว-323-ว-0051 , Samart Khumphlee ว-204-ว-0084

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ว-323-ว-0001

Analysis / Test Report

ALS

TESTING
No 0042
Lot ID: 24111231
Date Received : Oct 07, 2024
Date Reported : Oct 16, 2024
Report Number : 3121288-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

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: Photchana S. — Photchana Seeda, Scientist (4), ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ว-323-ว-0001

Analysis / Test Report

ALS

TESTING
No 0009
Lot ID: 24111231
Date Received : Oct 07, 2024
Date Reported : Oct 16, 2024
Report Number : 3121288-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111231-1
Sampled Date	Oct 07, 2024 2:20 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2564 **Plot** A53/2 **Site** Electrolux Professional (Thailand) Co.,Ltd
Date Analysis Commenced	Oct 08, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.63	≤5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ว-323-ว-0051 , Samart Khumphlee ว-204-ว-0084

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: Chanatt L. — Chanattagarn Inchom, Section Head, ว-204-ว-0008
Approved by: Kanokkorn Anek, Assistant General Manager, ว-204-ว-0004

Analysis / Test Report

ALS

TESTING
No 0042
Lot ID: 24111222
Date Received : Oct 07, 2024
Date Reported : Oct 16, 2024
Report Number : 3121269-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111222-1
Sampled Date	Oct 07, 2024 11:20 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 012 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Canteen/Toilet
Date Analysis Commenced	Oct 07, 2024
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 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	-	2.0	122	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	277	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.9	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	408	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	39	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ว-323-ว-0001

Analysis / Test Report

ALS

TESTING
No 0042
Lot ID: 24111222
Date Received : Oct 07, 2024
Date Reported : Oct 16, 2024
Report Number : 3121269-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Paramet Sattayakun ว-323-ว-0051 , Samart Khumphlee ว-204-ว-0084

Remark :
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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: Photchana S. — Photchana Seeda, Scientist (4), ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ว-323-ว-0001

Analysis / Test Report

ALS

TESTING
No 0009
Lot ID: 24111222
Date Received : Oct 07, 2024
Date Reported : Oct 16, 2024
Report Number : 3121269-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111222-1
Sampled Date	Oct 07, 2024 11:20 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 012 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Canteen/Toilet
Date Analysis Commenced	Oct 08, 2024
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 a lot of turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.09	≤5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ว-323-ว-0051 , Samart Khumphlee ว-204-ว-0084

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: Chanatt L. — Chanattagarn Inchom, Section Head, ว-204-ว-0008
Approved by: Kanokkorn Anek, Assistant General Manager, ว-204-ว-0004

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111225
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121279-1

Sample Number	24111225-1
Sampled Date	Oct 07, 2024 11:00 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_014_2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Gate 4
Date Analysis Commenced	Oct 07, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	79.1	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	262	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.6	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	508	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	53	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111225
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121279-1

Sampling By : Paramet Sattayakun ว-323-ว-0051 , Samart Khumphlee ว-204-ว-0084

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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

ALS

Analysis / Test Report

TESTING
No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111225
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121279-2

Sample Number	24111225-1
Sampled Date	Oct 07, 2024 11:00 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_014_2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Gate 4
Date Analysis Commenced	Oct 08, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.14	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ว-323-ว-0051 , Samart Khumphlee ว-204-ว-0084

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: Chanatt L. — Chanattagam Inchom, Section Head
Approved by: Kanokkorn Anek, Assistant General Manager

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111226
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121281-1

Sample Number	24111226-1
Sampled Date	Oct 07, 2024 11:10 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_013_2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Toilet/WSSS Testing/Q-Rate
Date Analysis Commenced	Oct 07, 2024
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 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	-	2.0	59.6	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	222	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.8	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	656	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111226
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121281-1

Sampling By : Paramet Sattayakun ว-323-ว-0051 , Saravadee Khantalasana

Remark :
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"<" : 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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

ALS

Analysis / Test Report

TESTING
No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111226
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121281-2

Sample Number	24111226-1
Sampled Date	Oct 07, 2024 11:10 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_013_2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Toilet/WSSS Testing/Q-Rate
Date Analysis Commenced	Oct 08, 2024
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 a lot of turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.17	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ว-323-ว-0051 , Samart Khumphlee ว-204-ว-0084

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: Chanatt L. — Chanattagam Inchom, Section Head
Approved by: Kanokkorn Anek, Assistant General Manager

Analysis / Test Report

TESTING
No 0042

Lot ID: 24111172
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121176-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111172-1
Sampled Date	Oct 07, 2024 2:35 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2556 **Plot** A-34/1 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 3
Date Analysis Commenced	Oct 07, 2024
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	-	2.0	47.6	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	1.5	25	190	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.4	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	504	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	87	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING
No 0042

Lot ID: 24111172
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121176-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-0051

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING
No 0042

Lot ID: 24111223
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121274-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111223-1
Sampled Date	Oct 07, 2024 10:55 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 011 2554 **Plot** A-34A,A31A **Site** Electrolux Thailand Co.,Ltd
Location	Factory 1
Date Analysis Commenced	Oct 07, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	24.1	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	1.5	25	70	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.4	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	880	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING
No 0042

Lot ID: 24111223
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121274-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-0051 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING
No 0009

Lot ID: 24111223
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121274-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111223-1
Sampled Date	Oct 07, 2024 10:55 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 011 2554 **Plot** A-34A,A31A **Site** Electrolux Thailand Co.,Ltd
Location	Factory 1
Date Analysis Commenced	Oct 08, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	Not Detected	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-0051 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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 Chanatt L. — Chanattagarn Irrefrom, Section Head, ทะเบียนเลขที่ ว-204-ว-0008
Approved by — Kanokkorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

Analysis / Test Report

TESTING
No 0042

Lot ID: 24111195
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121197-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111195-1
Sampled Date	Oct 08, 2024 2:33 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2557 **Plot** A19/1 **Site** FITESACKC Co.,Ltd
Location	Point 1 (In front of the factory)
Date Analysis Commenced	Oct 08, 2024
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	-	2.0	9.5	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	1.5	25	62	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	25.6	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	344	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	61	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24111195
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121197-1

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ว-0011

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24111171
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121175-1

Sample Number	24111171-1
Sampled Date	Oct 08, 2024 10:51 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 009 2554 Plot A-20-21 Site Fuburg Industrial Co.,Ltd
Date Analysis Commenced	Oct 08, 2024
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	-	2.0	6.5	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	35	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.6	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	240	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ว-0011

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24111171
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121175-1

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24111167
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121169-1

Sample Number	24111167-1
Sampled Date	Oct 07, 2024 10:10 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2554 Plot A-25 Site Guardian Industries Rayong Co.,Ltd
Location	Point 1
Date Analysis Commenced	Oct 07, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	33.4	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	552	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24111167
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121169-1

Sampling By : Paramet Saitayakun ทะเบียนเลขที่ ว-323-ว-0051

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24111166
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121163-1

Sample Number	24111166-1
Sampled Date	Oct 07, 2024 10:00 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2554 Plot A-25 Site Guardian Industries Rayong Co.,Ltd
Location	Point 2
Date Analysis Commenced	Oct 07, 2024
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	-	2.0	52.3	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	138	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.7	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	312	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	34	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS — Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24111166
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121163-1

Sampling By : Paramet Sattayakum ทะเบียนเลขที่ ว-323-ว-0051

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS — Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24111168
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121170-1

Sample Number : 24111168-1
Sampled Date : Oct 07, 2024 10:20 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL_004_2554 **Plot** : A-25 **Site** : Guardian Industries Rayong Co.,Ltd
Location : Point 3
Date Analysis Commenced : Oct 07, 2024
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	-	2.0	33.8	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	74	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.1	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	468	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	19	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS — Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24111168
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121170-1

Sampling By : Paramet Sattayakum ทะเบียนเลขที่ ว-323-ว-0051

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS — Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24111173
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121177-1

Sample Number : 24111173-1
Sampled Date : Oct 08, 2024 11:14 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL_002_2556 **Plot** : A-24 **Site** : GULF JP RIL Company Ltd
Date Analysis Commenced : Oct 08, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	43	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.8	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1700	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surasit Narapong ทะเบียนเลขที่ ว-323-ว-0031

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS — Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24111173
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121177-1

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS — Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24111203
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121250-1

Sample Number : 24111203-1
Sampled Date : Oct 08, 2024 2:05 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL_001_2562 **Plot** : A34B,A34C/1 **Site** : GULF RIL2 Company Limited
Location : [illegible]
Date Analysis Commenced : Oct 08, 2024
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	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.0	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	142	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	13	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111203
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121250-1

Sampling By : Surawit Narapong [illegible] ว-323-ง-0011

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ง-0029
Approved by: Dej Changchon, Senior Manager, [illegible] ว-323-ง-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111233
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121286-1

Sample Number	24111233-1
Sampled Date	Oct 08, 2024 1:54 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_002_2562 Plot A348,A34C/1 Site Gulf NLL2 Company Limited
Location	[illegible]
Date Analysis Commenced	Oct 08, 2024
Condition of Sample	Contained in four 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	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
pH (on site) *		-	-	8.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.0	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1450	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	28	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resources and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017)
Note : Dissolved Oxygen guideline set by Environmental Impact Assessment Report of Gulf NLL2 Co., Ltd

Sampling By : Surawit Narapong [illegible] ว-323-ง-0011 , Samart Khumphlee [illegible] ว-204-ง-0084

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ง-0028
Approved by: Dej Changchon, Senior Manager, [illegible] ว-323-ง-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111233
Date Received : Oct 08, 2024
Date Reported : Oct 17, 2024
Report Number : 3121286-2

Sample Number	24111233-1
Sampled Date	Oct 08, 2024 1:54 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_002_2562 Plot A348,A34C/1 Site Gulf NLL2 Company Limited
Location	[illegible]
Date Analysis Commenced	Oct 09, 2024
Condition of Sample	Contained in four 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							
Calcium	mg/L	0.03	0.05	154	No Standard	In-house method : STH 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Magnesium	mg/L	0.03	0.05	30.6	No Standard	In-house method : STH 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
SAR *		-	0.10	3.74	No Standard	In-house method : STH 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Sodium	mg/L	0.03	0.05	194	No Standard	In-house method : STH 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resources and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017)
Note : Dissolved Oxygen guideline set by Environmental Impact Assessment Report of Gulf NLL2 Co., Ltd

Sampling By : Surawit Narapong [illegible] ว-323-ง-0011 , Samart Khumphlee [illegible] ว-204-ง-0084

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: Sawitree N. — Sawitree Nonungpum, Manager, [illegible] ว-204-ง-0007
Approved by: Kanoknam Aeek, Assistant General Manager, [illegible] ว-204-ง-0004

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111233
Date Received : Oct 08, 2024
Date Reported : Oct 17, 2024
Report Number : 3121286-3

Sample Number	24111233-1
Sampled Date	Oct 08, 2024 1:54 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_002_2562 Plot A348,A34C/1 Site Gulf NLL2 Company Limited
Location	[illegible]
Date Analysis Commenced	Oct 08, 2024
Condition of Sample	Contained in four 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							
Chloride	mg/L	0.05	0.1	0.16	No Standard	In-house method : STH 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Conductivity at 25 Degree C	micromhos/cm	-	0.5	2086	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong
Dissolved Oxygen	mg/L	-	0.1	6.9	≥4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-O (G)	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resources and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017)
Note : Dissolved Oxygen guideline set by Environmental Impact Assessment Report of Gulf NLL2 Co., Ltd

Sampling By : Surawit Narapong , Samart Khumphlee

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

Approved by: Siriluk P. — Siriluk Bunnak, Section Head

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111180
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121293-1

Sample Number	24111180-1
Sampled Date	Oct 07, 2024 9:45 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2566 Plot A16 Site Michelin Siam Co.,Ltd
Date Analysis Commenced	Oct 07, 2024
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	-	2.0	6.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	37	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	6.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	33.4	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2000	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	21	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun [illegible] ว-323-ง-0051

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ง-0028
Approved by: Dej Changchon, Senior Manager, [illegible] ว-323-ง-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111180
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121293-1

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ง-0028
Approved by: Dej Changchon, Senior Manager, [illegible] ว-323-ง-0001

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Analysis / Test Report

TESTING
No 0042

Lot ID: 24111169
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121172-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sample Number 24111169-1
Sampled Date Oct 07, 2024 3:35 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 001 2554 **Plot** 4 5-7 **Site** Navaplastic Industrial Co.,Ltd.
Date Analysis Commenced Oct 07, 2024
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	-	2.0	135	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	326	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.7	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	524	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	121	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paravet Sattayakun ทะเบียนเลข ว-323-ว-0051

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลข ว-323-ว-0028
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลข ว-323-ว-0001

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Analysis / Test Report

TESTING
No 0042

Lot ID: 24111169
Date Received : Oct 07, 2024
Date Reported : Oct 15, 2024
Report Number : 3121172-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลข ว-323-ว-0028
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลข ว-323-ว-0001

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Analysis / Test Report

TESTING
No 0042

Lot ID: 24111177
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121181-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sample Number 24111177-1
Sampled Date Oct 08, 2024 9:30 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 010 2556 **Plot** A 18/2 **Site** Oil States Industries (Thailand) Ltd.
Location Point 1
Date Analysis Commenced Oct 08, 2024
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	-	2.0	72.3	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	290	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	10	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	304	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	127	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลข ว-323-ว-0028
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลข ว-323-ว-0001

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Analysis / Test Report

TESTING
No 0042

Lot ID: 24111177
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121181-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sampling By : Surawit Narapong ทะเบียนเลข ว-323-ว-0011

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลข ว-323-ว-0028
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลข ว-323-ว-0001

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Analysis / Test Report

TESTING
No 0042

Lot ID: 24111178
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121183-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sample Number 24111178-1
Sampled Date Oct 08, 2024 9:34 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 011 2556 **Plot** A-18/2 **Site** Oil States Industries (Thailand) Ltd.
Location Point 2
Date Analysis Commenced Oct 08, 2024
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	-	2.0	40.5	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	224	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.0	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	316	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	116	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลข ว-323-ว-0028
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลข ว-323-ว-0001

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Analysis / Test Report

TESTING
No 0042

Lot ID: 24111178
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121183-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Sampling By : Surawit Narapong ทะเบียนเลข ว-323-ว-0011

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลข ว-323-ว-0028
Approved by — Dej Changchon, Senior Manager, ทะเบียนเลข ว-323-ว-0001

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111209
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121291-1

Sample Number	24111209-1
Sampled Date	Oct 08, 2024 9:49 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2564 **Plot** A55-9 **Site** S Kleber Chemical Co.,Ltd
Date Analysis Commenced	Oct 08, 2024
Condition of Sample	Contained in 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	-	2.0	18.7	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	74	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed. 2004	Rayong
Oil & Grease	mg/L	-	3	3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.7	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	212	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	35	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ล-0028

Approved by D. Chungchon
Dej Chungchon
Senior Manager
ทะเบียนเลขที่ ว-323-ล-0001

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111209
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121291-1

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)
Sampling By : Surawet Narapong ทะเบียนเลขที่ ว-323-ล-0011

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 Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ล-0028

Approved by D. Chungchon
Dej Chungchon
Senior Manager
ทะเบียนเลขที่ ว-323-ล-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111209
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121291-2

Sample Number	24111209-1
Sampled Date	Oct 08, 2024 9:49 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2564 **Plot** A55-9 **Site** S Kleber Chemical Co.,Ltd
Date Analysis Commenced	Oct 08, 2024
Condition of Sample	Contained in 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							
Ammonia Nitrogen	mg/L	0.05	0.1	55.6	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawet Narapong

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

Approved by Photchana S.
Photchana Seeda
Scientist (4)

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111207
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121251-1

Sample Number	24111207-1
Sampled Date	Oct 08, 2024 9:24 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 010 2554 **Plot** A-52 **Site** SPC Star Plus Chemical Co.,Ltd
Date Analysis Commenced	Oct 08, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed. 2004	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.5	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	668	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Technical Management Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ล-0028

Approved by D. Chungchon
Dej Chungchon
Senior Manager
ทะเบียนเลขที่ ว-323-ล-0001

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111207
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121251-1

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawet Narapong ทะเบียนเลขที่ ว-323-ล-0011

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 Photchana S.
Photchana Seeda
Scientist (4)
ทะเบียนเลขที่ ว-323-ล-0028

Approved by D. Chungchon
Dej Chungchon
Senior Manager
ทะเบียนเลขที่ ว-323-ล-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24111207
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121251-2

Sample Number	24111207-1
Sampled Date	Oct 08, 2024 9:24 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 010 2554 **Plot** A-52 **Site** SPC Star Plus Chemical Co.,Ltd
Date Analysis Commenced	Oct 08, 2024
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							
Ammonia Nitrogen	mg/L	0.05	0.1	0.2	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawet Narapong

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

Approved by Photchana S.
Photchana Seeda
Scientist (4)

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location: WHA RIL

Lot ID: 24111175
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121178-1

Sample Number	24111175-1
Sampled Date	Oct 08, 2024 3:50 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 005 2556 **Plot** A-4 **Site** Starore
Date Analysis Commenced	Oct 08, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.3	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	92	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong

Technical Management Photchana S. — Photchana Seeda, Scientist (4)
Approved by D. — Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location: WHA RIL

Lot ID: 24111175
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121178-1

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 Photchana S. — Photchana Seeda, Scientist (4)
Approved by D. — Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location: WHA RIL

Lot ID: 24111208
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121255-1

Sample Number	24111208-1
Sampled Date	Oct 08, 2024 9:42 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2562 **Plot** A55-6 **Site** Starwood Chemical Co.,Ltd
Date Analysis Commenced	Oct 08, 2024
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	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analyses manual, Environmental Engineering Association of Thailand, 4th ed. 2004	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.2	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1600	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Technical Management Photchana S. — Photchana Seeda, Scientist (4)
Approved by D. — Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location: WHA RIL

Lot ID: 24111208
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121255-1

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)
Sampling By : Surawit Narapong

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 Photchana S. — Photchana Seeda, Scientist (4)
Approved by D. — Dej Changchon, Senior Manager

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location: WHA RIL

Lot ID: 24111208
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121255-2

Sample Number	24111208-1
Sampled Date	Oct 08, 2024 9:42 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2562 **Plot** A55-6 **Site** Starwood Chemical Co.,Ltd
Date Analysis Commenced	Oct 08, 2024
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							
Ammonia Nitrogen	mg/L	0.05	0.1	0.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong

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

Approved by Photchana S. — Photchana Seeda, Scientist (4)

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location: WHA RIL

Lot ID: 24111191
Date Received : Oct 04, 2024
Date Reported : Oct 11, 2024
Report Number : 3121190-1

Sample Number	24111191-1
Sampled Date	Oct 04, 2024 11:05 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 012 2556 **Plot** A 15A **Site** Stiebel (Asia Pacific) Ltd
Date Analysis Commenced	Oct 04, 2024
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	-	2.0	70.3	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	190	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.6	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	348	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	42	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4)
Approved by D. — Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24111191
Date Received : Oct 04, 2024
Date Reported : Oct 11, 2024
Report Number : 3121190-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Saneam Khuysbua ว-323-ง-0005

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: Photchana S. — Photchana Seeda, Scientist (4), ว-323-ง-0028
Approved by: Dej Changchon, Senior Manager, ว-323-ง-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24111183
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121298-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111183-1
Sampled Date	Oct 08, 2024 9:55 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2567 **Plot** A55-3 **Site** Stronger Hydraulic (Thailand) Co.,Ltd
Location	ลานจอด
Date Analysis Commenced	Oct 08, 2024
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	-	2.0	34.4	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	126	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.4	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	268	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	20	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ว-323-ง-0028
Approved by: Dej Changchon, Senior Manager, ว-323-ง-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24111183
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121298-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Sumwet Nampong ว-323-ง-0011

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: Photchana S. — Photchana Seeda, Scientist (4), ว-323-ง-0028
Approved by: Dej Changchon, Senior Manager, ว-323-ง-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24111170
Date Received : Oct 04, 2024
Date Reported : Oct 11, 2024
Report Number : 3121173-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111170-1
Sampled Date	Oct 04, 2024 11:15 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 006 2554 **Plot** A-36 **Site** T.T.T International Co.,Ltd
Date Analysis Commenced	Oct 04, 2024
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	-	2.0	90.8	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	296	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	448	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	74	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Saneam Khuysbua ว-323-ง-0005

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ว-323-ง-0028
Approved by: Dej Changchon, Senior Manager, ว-323-ง-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24111170
Date Received : Oct 04, 2024
Date Reported : Oct 11, 2024
Report Number : 3121173-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

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: Photchana S. — Photchana Seeda, Scientist (4), ว-323-ง-0028
Approved by: Dej Changchon, Senior Manager, ว-323-ง-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24111190
Date Received : Oct 04, 2024
Date Reported : Oct 11, 2024
Report Number : 3121188-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111190-1
Sampled Date	Oct 04, 2024 10:10 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 009 2556 **Plot** A-8/2 **Site** Thai Harrock Co.,Ltd
Date Analysis Commenced	Oct 04, 2024
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	-	2.0	13.3	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	62	≤400	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	33.4	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	208	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	13	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ว-323-ง-0028
Approved by: Dej Changchon, Senior Manager, ว-323-ง-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24111190
Date Received : Oct 04, 2024
Date Reported : Oct 11, 2024
Report Number : 3121188-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

Sampling By : Sareeam Khuyotsa ทะเบียนเลขที่ ว-323-ว-0005

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by D. Changchon — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24111210
Date Received : Oct 04, 2024
Date Reported : Oct 11, 2024
Report Number : 3121257-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

Sample Number	24111210-1
Sampled Date	Oct 04, 2024 10:50 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 008 2554 **Plot** A-26 **Site** TOP Union Co.,Ltd
Date Analysis Commenced	Oct 04, 2024
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	-	2.0	63.9	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	190	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed.,2004	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.3	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	364	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	54	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by D. Changchon — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24111210
Date Received : Oct 04, 2024
Date Reported : Oct 11, 2024
Report Number : 3121257-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Sareeam Khuyotsa ทะเบียนเลขที่ ว-323-ว-0005 , Thanasoun Namakunna ทะเบียนเลขที่ ว-204-ว-0101

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by D. Changchon — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No 0009

Lot ID: 24111210
Date Received : Oct 04, 2024
Date Reported : Oct 11, 2024
Report Number : 3121257-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

Sample Number	24111210-1
Sampled Date	Oct 04, 2024 10:50 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 008 2554 **Plot** A-26 **Site** TOP Union Co.,Ltd
Date Analysis Commenced	Oct 07, 2024
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	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Sareeam Khuyotsa ทะเบียนเลขที่ ว-323-ว-0005 , Thanasoun Namakunna ทะเบียนเลขที่ ว-204-ว-0101

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 Chanatt L. — Chanattagarn Inchem, Section Head, ทะเบียนเลขที่ ว-204-ว-0008
Approved by Kanokkorn Anek — Kanokkorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

Analysis / Test Report

TESTING No 0042

Lot ID: 24111176
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121180-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

Sample Number	24111176-1
Sampled Date	Oct 08, 2024 9:13 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 008 2556 **Plot** A-15 **Site** TSN Wire Co.,Ltd
Date Analysis Commenced	Oct 08, 2024
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	-	2.0	48.7	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	146	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.0	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	360	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	18	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Nampong ทะเบียนเลขที่ ว-323-ว-0011

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by D. Changchon — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24111176
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121180-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by D. Changchon — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0042

Lot ID: 24111201
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121246-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111201-1
Sampled Date	Oct 08, 2024 3:02 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_004_2559 **Plot** A57/5,A57/7 **Site** Umicore Autocat (Thailand) Co.,Ltd
Date Analysis Commenced	Oct 08, 2024
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	-	2.0	32.3	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	89	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.6	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	208	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	41	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

ALS

Analysis / Test Report

TESTING
No 0042

Lot ID: 24111201
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121246-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Surawit Narapong

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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

ALS

Analysis / Test Report

TESTING
No 0042

Lot ID: 24111224
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121277-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111224-1
Sampled Date	Oct 08, 2024 10:57 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_005_2554 **Plot** A-22 **Site** Unity Industrial Co.,Ltd
Date Analysis Commenced	Oct 08, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	316	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong, Samart Khumphlee

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

ALS

Analysis / Test Report

TESTING
No 0042

Lot ID: 24111224
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121277-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

ALS

Analysis / Test Report

TESTING
No 0008

Lot ID: 24111224
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121277-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111224-1
Sampled Date	Oct 08, 2024 10:57 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_005_2554 **Plot** A-22 **Site** Unity Industrial Co.,Ltd
Date Analysis Commenced	Oct 09, 2024
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	0.02	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong, Samart Khumphlee

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: Chanatt L. — Chanattagarn Imchom, Section Head
Approved by: Kanokorn Anek, Assistant General Manager

ALS

Analysis / Test Report

TESTING
No 0042

Lot ID: 24111184
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121301-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24111184-1
Sampled Date	Oct 08, 2024 2:57 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_003_2567 **Plot** A53/3 **Site** YAOHUN MACHINERY COMPANY LIMITED
Date Analysis Commenced	Oct 08, 2024
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	-	2.0	37.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	147	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.1	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	408	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	26	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24111184
Date Received : Oct 08, 2024
Date Reported : Oct 16, 2024
Report Number : 3121301-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

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 Photchana S. — Photchana Seeda, Scientist (4)
Approved by Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24124775
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151612-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number 24124775-1
Sampled Date Nov 08, 2024 10:10 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 001 2567 **Plot** A01 **Site** ACG CAPSULES (THAILAND) CO.,LTD
Date Analysis Commenced Nov 08, 2024
Condition of Sample Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property Purple, 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	-	2.0	26.6	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	159	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.0	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	372	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	69	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun

Technical Management Photchana S. — Photchana Seeda, Scientist (4)
Approved by Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24124775
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151612-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

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 Photchana S. — Photchana Seeda, Scientist (4)
Approved by Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24124791
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151570-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number 24124791-1
Sampled Date Nov 08, 2024 3:00 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 005 2557 **Plot** A34/2 **Site** Asian Unity Part Co.,Ltd
Date Analysis Commenced Nov 08, 2024
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	-	2.0	18.5	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	57	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.1	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	456	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.(Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4)
Approved by Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24124791
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151570-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Paramet Sattayakun

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 Photchana S. — Photchana Seeda, Scientist (4)
Approved by Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24124793
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151575-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number 24124793-1
Sampled Date Nov 11, 2024 3:37 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 001 2559 **Plot** A29/1,A29/2 **Site** Beko Thai Co.,Ltd
Location Point 1
Date Analysis Commenced Nov 11, 2024
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	-	2.0	27.4	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	69	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.3	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	700	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	20	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.(Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4)
Approved by Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124793
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151575-1

Sampling By : Phongthep Sitthiloh ทะเบียนเลขที่ ว-323-ง-0023

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ง-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124794
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151576-1

Sample Number	24124794-1
Sampled Date	Nov 11, 2024 3:49 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2559 **Plot** A29/3 **Site** Beko Thai Co.,Ltd
Location	Point 2
Date Analysis Commenced	Nov 11, 2024
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	-	2.0	16.8	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	68	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	216	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	13	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ง-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124794
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151576-1

Sampling By : Paramet Sailayakum ทะเบียนเลขที่ ว-323-ง-0051

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ง-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124786
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151561-1

Sample Number	24124786-1
Sampled Date	Nov 07, 2024 3:10 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 013 2556 **Plot** A-16A **Site** Bitech Automotive Co.,Ltd
Date Analysis Commenced	Nov 07, 2024
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	-	2.0	102	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	238	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.9	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	228	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	50	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ง-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124786
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151561-1

Sampling By : Wanlop Hunchanarew ทะเบียนเลขที่ ว-323-ง-0028

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ง-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124806
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151590-1

Sample Number	24124806-1
Sampled Date	Nov 11, 2024 4:33 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 004 2556 **Plot** A-28 **Site** Caterpillar (Thailand) Limited
Location	Factory 1 Point 2
Date Analysis Commenced	Nov 11, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	66.5	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	174	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.3	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	340	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant

Technical Management Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ง-0031
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongla lok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24124806
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151590-1

Sampling By : Phongthep Sitthiloh ทะเบียนเลขที่ ว-323-ว-0023 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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: Chontichak — Chonticha Suhongkoh, Scientist (1), ทะเบียนเลขที่ ว-323-ว-0031
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongla lok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0009
Lot ID: 24124806
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151590-2

Sample Number	24124806-1
Sampled Date	Nov 11, 2024 4:33 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	PIL 004 2556 Plot A-28 Site Caterpillar (Thailand) Limited
Location	Factory 1 Point 2
Date Analysis Commenced	Nov 12, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Lead	mg/L	0.0003	0.0005	0.003	≤0.2	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Phongthep Sitthiloh ทะเบียนเลขที่ ว-323-ว-0023 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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: Sawitree N. — Sawitree Ilonangam, Manager, ทะเบียนเลขที่ ว-204-ว-0007
Approved by: Kanokkorn Anel, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongla lok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24124808
Date Received : Nov 12, 2024
Date Reported : Nov 18, 2024
Report Number : 3151593-1

Sample Number	24124808-1
Sampled Date	Nov 12, 2024 2:35 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	PIL 007 2556 Plot A-56/2 Site Caterpillar (Thailand) Limited
Location	Factory 2 Point 2
Date Analysis Commenced	Nov 12, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	162	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	304	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.8	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	412	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	116	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Chontichak — Chonticha Suhongkoh, Scientist (1), ทะเบียนเลขที่ ว-323-ว-0031
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongla lok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24124808
Date Received : Nov 12, 2024
Date Reported : Nov 18, 2024
Report Number : 3151593-1

Sampling By : Wasan Kmunb ทะเบียนเลขที่ ว-323-ว-0019 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

Remark :
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"<" : 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: Chontichak — Chonticha Suhongkoh, Scientist (1), ทะเบียนเลขที่ ว-323-ว-0031
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongla lok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0009
Lot ID: 24124808
Date Received : Nov 12, 2024
Date Reported : Nov 18, 2024
Report Number : 3151593-2

Sample Number	24124808-1
Sampled Date	Nov 12, 2024 2:35 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	PIL 007 2556 Plot A-56/2 Site Caterpillar (Thailand) Limited
Location	Factory 2 Point 2
Date Analysis Commenced	Nov 13, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Lead	mg/L	0.0003	0.0005	0.002	≤0.2	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wasan Kmunb ทะเบียนเลขที่ ว-323-ว-0019 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

Remark :
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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: Sawitree N. — Sawitree Ilonangam, Manager, ทะเบียนเลขที่ ว-204-ว-0007
Approved by: Kanokkorn Anel, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongla lok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24124788
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151565-1

Sample Number	24124788-1
Sampled Date	Nov 08, 2024 4:00 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	PIL 002 2557 Plot A19/2 Site Chuhatsu (Thailand) Ltd
Date Analysis Commenced	Nov 08, 2024
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	-	2.0	19.3	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	69	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.3	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	140	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	26	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Senda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124788
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151565-1

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-0051

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124787
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151563-1

Sample Number 24124787-1
Sampled Date Nov 08, 2024 3:10 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 001 2557 **Plot** A34/3 **Site** Delta Hydraulics (Thailand) Ltd
Date Analysis Commenced Nov 08, 2024
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	-	2.0	58.1	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	144	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	8	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	5.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.1	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	136	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	26	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124787
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151563-1

Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-0051

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
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Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124821
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151607-1

Sample Number 24124821-1
Sampled Date Nov 11, 2024 2:09 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 001 2564 **Plot** A53/2 **Site** Electrolux Professional (Thailand) Co.,Ltd
Date Analysis Commenced Nov 11, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	15.7	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	57	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.2	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	212	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	25	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Chontichak — Chonticha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124821
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151607-1

Sampling By : Phongthep Sitthiloh ทะเบียนเลขที่ ว-323-ว-0023 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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 Chontichak — Chonticha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124821
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151607-2

Sample Number 24124821-1
Sampled Date Nov 11, 2024 2:09 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 001 2564 **Plot** A53/2 **Site** Electrolux Professional (Thailand) Co.,Ltd
Date Analysis Commenced Nov 12, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.75	≤5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)
Sampling By : Phongthep Sitthiloh ทะเบียนเลขที่ ว-323-ว-0023 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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 Sawitree N — Sawitree Ninsangam, Manager, ทะเบียนเลขที่ ว-204-ว-0007
Approved by Kanokkorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124814
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151595-1

Sample Number	24124814-1
Sampled Date	Nov 11, 2024 10:40 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_012_2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Canteen/Toilet
Date Analysis Commenced	Nov 11, 2024
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	-	2.0	62.5	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	184	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	9	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.3	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	332	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	38	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chontichak
Chonticha Suhongkoch
Scientist (3)

Approved by Dej Changchon
Senior Manager

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124814
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151595-1

Sampling By : Phongthep Sitthiloh ทะเบียนเลขที่ ว-323-ว-0023 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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 Chontichak
Chonticha Suhongkoch
Scientist (3)

Approved by Dej Changchon
Senior Manager

ALS

Analysis / Test Report

TESTING
No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124814
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151595-2

Sample Number	24124814-1
Sampled Date	Nov 11, 2024 10:40 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_012_2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Canteen/Toilet
Date Analysis Commenced	Nov 12, 2024
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	0.28	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Phongthep Sitthiloh ทะเบียนเลขที่ ว-323-ว-0023 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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 Sawitree N
Sawitree Nimangam
Manager

Approved by Kanokkorn Anek
Assistant General Manager

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124818
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151602-1

Sample Number	24124818-1
Sampled Date	Nov 11, 2024 1:40 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_013_2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Toilet/WSSS Testing/Q Rate
Date Analysis Commenced	Nov 11, 2024
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	-	2.0	110	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	260	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.3	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	532	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	49	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Photchana S.
Photchana Seeda
Scientist (4)

Approved by Dej Changchon
Senior Manager

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124818
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151602-1

Sampling By : Phongthep Sitthiloh ทะเบียนเลขที่ ว-323-ว-0023 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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 Photchana S.
Photchana Seeda
Scientist (4)

Approved by Dej Changchon
Senior Manager

ALS

Analysis / Test Report

TESTING
No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124818
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151602-2

Sample Number	24124818-1
Sampled Date	Nov 11, 2024 1:40 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_013_2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Toilet/WSSS Testing/Q Rate
Date Analysis Commenced	Nov 12, 2024
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	0.30	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Phongthep Sitthiloh ทะเบียนเลขที่ ว-323-ว-0023 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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 Sawitree N
Sawitree Nimangam
Manager

Approved by Kanokkorn Anek
Assistant General Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124766
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151548-1

Sample Number	24124766-1
Sampled Date	Nov 11, 2024 2:20 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2556 **Plot** A-34/1 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 3
Date Analysis Commenced	Nov 11, 2024
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	-	2.0	94.1	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	203	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	33.8	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	404	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	87	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124766
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151548-1

Sampling By : Phongthep Sithiloh ทะเบียนเลขที่ ว-323-ว-0023

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 Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124815
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151597-1

Sample Number	24124815-1
Sampled Date	Nov 11, 2024 1:25 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 011 2554 **Plot** A-34A,A31A **Site** Electrolux Thailand Co.,Ltd
Location	Factory 1
Date Analysis Commenced	Nov 11, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	42.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	132	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.7	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	624	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	47	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124815
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151597-1

Sampling By : Phongthep Sithiloh ทะเบียนเลขที่ ว-323-ว-0023 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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 Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No.0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124815
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151597-2

Sample Number	24124815-1
Sampled Date	Nov 11, 2024 1:25 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 011 2554 **Plot** A-34A,A31A **Site** Electrolux Thailand Co.,Ltd
Location	Factory 1
Date Analysis Commenced	Nov 12, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.22	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Phongthep Sithiloh ทะเบียนเลขที่ ว-323-ว-0023 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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 Saowitree Srisungnern, Manager, ทะเบียนเลขที่ ว-204-ว-0007
Approved by Kanokkorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124789
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151567-1

Sample Number	24124789-1
Sampled Date	Nov 11, 2024 2:36 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2557 **Plot** A19/1 **Site** FITESA(TC) Co.,Ltd
Location	Point 1 (In front of the factory)
Date Analysis Commenced	Nov 11, 2024
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	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	<25	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *	-	-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	22.1	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	42	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124789
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151567-1

Sampling By : Phongthep Sithiloh ทะเบียนเลขที่ ว-323 ว-0023

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: Chontichak — Chonticha Suthngkoch, Scientist (3), ทะเบียนเลขที่ ว-323 ว-0011
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 ว-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124790
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151568-1

Sample Number 24124790-1
Sampled Date Nov 11, 2024 2:28 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 004 2557 **Plot** A19/1 **Site** FITESACIC Co.,Ltd
Location Point 2 (side of the factory)
Date Analysis Commenced Nov 11, 2024
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	-	2.0	103	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	1.5	25	240	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.1	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	368	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Chontichak — Chonticha Suthngkoch, Scientist (3), ทะเบียนเลขที่ ว-323 ว-0011
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 ว-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124790
Date Received : Nov 11, 2024
Date Reported : Nov 18, 2024
Report Number : 3151568-1

Sampling By : Phongthep Sithiloh ทะเบียนเลขที่ ว-323 ว-0023

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: Chontichak — Chonticha Suthngkoch, Scientist (3), ทะเบียนเลขที่ ว-323 ว-0011
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 ว-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124765
Date Received : Nov 07, 2024
Date Reported : Nov 13, 2024
Report Number : 3151547-1

Sample Number 24124765-1
Sampled Date Nov 07, 2024 3:38 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 009 2554 **Plot** A-20-21 **Site** Fulburg Industrial Co.,Ltd
Date Analysis Commenced Nov 07, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	1.5	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.8	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	152	≤1000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wanlop Hunchanaow ทะเบียนเลขที่ ว-323 ว-0038

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323 ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 ว-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124765
Date Received : Nov 07, 2024
Date Reported : Nov 13, 2024
Report Number : 3151547-1

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323 ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 ว-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124761
Date Received : Nov 07, 2024
Date Reported : Nov 13, 2024
Report Number : 3151543-1

Sample Number 24124761-1
Sampled Date Nov 07, 2024 2:19 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 002 2554 **Plot** 4.25 **Site** Guardian Industries Rayong Co.,Ltd
Location Point 1
Date Analysis Commenced Nov 07, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	1.5	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	33.0	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	316	≤1000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323 ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 ว-0001

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 24124761
Date Received : Nov 07, 2024
Date Reported : Nov 13, 2024
Report Number : 3151541-1

Sampling By : Wanlop Hunchanasow ทะเบียนเลขที่ ว-323-ล-0038

Remark :
LOD : Limit of Detection
"<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
Analysis(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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ล-0028

Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ล-0001

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 24124760
Date Received : Nov 07, 2024
Date Reported : Nov 13, 2024
Report Number : 3151538-1

Sample Number	24124760-1
Sampled Date	Nov 07, 2024 2:13 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_003_2554 Plot A-25 Site Guardian Industries Rayong Co.,Ltd.
Location	Point 2
Date Analysis Commenced	Nov 07, 2024
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	-	2.0	72.9	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	193	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.7	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	304	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	32	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ล-0028

Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ล-0001

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 24124760
Date Received : Nov 07, 2024
Date Reported : Nov 13, 2024
Report Number : 3151538-1

Sampling By : Wanlop Hunchanasow ทะเบียนเลขที่ ว-323-ล-0038

Remark :
LOD : Limit of Detection
"<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
Analysis(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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ล-0028

Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ล-0001

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 24124762
Date Received : Nov 07, 2024
Date Reported : Nov 13, 2024
Report Number : 3151542-1

Sample Number	24124762-1
Sampled Date	Nov 07, 2024 2:27 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_004_2554 Plot A-25 Site Guardian Industries Rayong Co.,Ltd.
Location	Point 3
Date Analysis Commenced	Nov 07, 2024
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	-	2.0	37.0	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	151	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.7	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	324	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	29	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ล-0028

Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ล-0001

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 24124762
Date Received : Nov 07, 2024
Date Reported : Nov 13, 2024
Report Number : 3151542-1

Sampling By : Wanlop Hunchanasow ทะเบียนเลขที่ ว-323-ล-0038

Remark :
LOD : Limit of Detection
"<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
Analysis(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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ล-0028

Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ล-0001

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory | Monthly
Project Location : WHA RIL

Lot ID: 24124767
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151549-1

Sample Number	24124767-1
Sampled Date	Nov 08, 2024 10:55 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_002_2556 Plot A-24 Site GULF JP NLL Company Ltd.
Date Analysis Commenced	Nov 08, 2024
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	-	2.0	5.5	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	43	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.0	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1650	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pamonrat Sattayakun ทะเบียนเลขที่ ว-323-ล-0051

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ล-0028

Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ล-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24124767
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151549-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Remark :
LOD : Limit of Detection
"<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
Analysis(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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24124797
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151580-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number 24124797-1
Sampled Date Nov 08, 2024 2:45 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 001_2562 **Plot** A34B,A34C/1 **Site** Gulf NLL2 Company Limited
Location จุดที่ 1 [illegible]
Date Analysis Commenced Nov 08, 2024
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	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	<25	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.7	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	208	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24124797
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151580-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Paramet Sattayakun

Remark :
LOD : Limit of Detection
"<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
Analysis(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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24124823
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151605-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number 24124823-1
Sampled Date Nov 08, 2024 2:30 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 002_2562 **Plot** A34B,A34C/1 **Site** Gulf NLL2 Company Limited
Location จุดที่ 2 [illegible]
Date Analysis Commenced Nov 08, 2024
Condition of Sample Contained in four 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	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
pH (on site) *		-	-	7.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.3	≤40	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	600	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤50	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resources and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017)
Sampling By : Paramet Sattayakun , Samart Khumphiee

Remark :
LOD : Limit of Detection
"<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
Analysis(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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0009

Lot ID: 24124823
Date Received : Nov 08, 2024
Date Reported : Nov 16, 2024
Report Number : 3151605-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number 24124823-1
Sampled Date Nov 08, 2024 2:30 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 002_2562 **Plot** A34B,A34C/1 **Site** Gulf NLL2 Company Limited
Location จุดที่ 2 [illegible]
Date Analysis Commenced Nov 08, 2024
Condition of Sample Contained in four 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							
Calcium	mg/L	0.03	0.05	67.5	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Magnesium	mg/L	0.03	0.05	8.32	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
SAR *		-	0.10	2.44	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Sodium	mg/L	0.03	0.05	79.9	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Water Testing							
Chloride *	mg/L	0.05	0.1	Not Detected	No Standard	In-house method : STM 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	942	No Standard	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong
Dissolved Oxygen *	mg/L	-	0.1	7.4	≥4	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-O (G)	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resources and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017)
Note : Dissolved Oxygen guideline set by Environmental Impact Assessment Report of Gulf NLL2 Co., Ltd
Sampling By : Paramet Sattayakun , Samart Khumphiee

Approved by: Chanattagam Imchom, Section Head

Analysis / Test Report

TESTING No 0009

Lot ID: 24124823
Date Received : Nov 08, 2024
Date Reported : Nov 16, 2024
Report Number : 3151605-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

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

Approved by: Chanattagam Imchom, Section Head

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124774
Date Received : Nov 12, 2024
Date Reported : Nov 18, 2024
Report Number : 3151610-1

Sample Number 24124774-1
Sampled Date Nov 12, 2024 2:10 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 001 2566 **Plot** A16 **Site** Michelin Siam Co.,Ltd
Date Analysis Commenced Nov 12, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	13.8	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	66	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	6.8	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	36.8	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2350	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	15	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wasan Kmunk ทะเบียนเลขที่ ว-323-ง-0019

Technical Management Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ง-0031
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124774
Date Received : Nov 12, 2024
Date Reported : Nov 18, 2024
Report Number : 3151610-1

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 Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ง-0031
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124763
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151544-1

Sample Number 24124763-1
Sampled Date Nov 08, 2024 9:45 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 001 2554 **Plot** A5-7 **Site** Navaplastic Industrial Co.,Ltd
Date Analysis Commenced Nov 08, 2024
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	-	2.0	111	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	367	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.4	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	412	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	136	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ง-0051

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ง-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124763
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151544-1

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ง-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124770
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151553-1

Sample Number 24124770-1
Sampled Date Nov 07, 2024 9:48 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 010 2556 **Plot** A-18/2 **Site** Oil States Industries (Thailand) Ltd
Location Point 1
Date Analysis Commenced Nov 07, 2024
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	-	2.0	92.3	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	297	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.9	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	456	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	164	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ง-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124770
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151553-1

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ง-0011

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ง-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ง-0001

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124802
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151608-1

Sample Number 24124802-1
Sampled Date Nov 08, 2024 11:25 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 002 2564 **Plot** A55-9 **Site** S Kleber Chemical Co.,Ltd
Date Analysis Commenced Nov 08, 2024
Condition of Sample Contained in 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	-	2.0	17.0	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	82	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	0.1	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed.,2004	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.9	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	152	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong

Technical Management Photchana S. Photchana Seeda Scientist (4)
Approved by D. Changchon Dej Changchon Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nongkalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124802
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151608-1

Sample Number 24124802-1
Sampled Date Nov 08, 2024 11:25 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 002 2564 **Plot** A55-9 **Site** S Kleber Chemical Co.,Ltd
Date Analysis Commenced Nov 08, 2024
Condition of Sample Contained in 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							
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	54.6	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	45	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)
Sampling By : Paramet Sattayakun

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 Photchana S. Photchana Seeda Scientist (4)
Approved by D. Changchon Dej Changchon Senior Manager

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nongkalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124802
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151608-2

Sample Number 24124802-1
Sampled Date Nov 08, 2024 11:25 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 002 2564 **Plot** A55-9 **Site** S Kleber Chemical Co.,Ltd
Date Analysis Commenced Nov 08, 2024
Condition of Sample Contained in 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							
Ammonia Nitrogen	mg/L	0.05	0.1	47.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun

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

Approved by Photchana S. Photchana Seeda Scientist (4)

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nongkalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124799
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151582-1

Sample Number 24124799-1
Sampled Date Nov 07, 2024 9:59 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 010 2554 **Plot** A-52 **Site** SPC Star Plus Chemical Co.,Ltd
Date Analysis Commenced Nov 07, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed.,2004	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.2	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	716	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	8	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management Photchana S. Photchana Seeda Scientist (4)
Approved by D. Changchon Dej Changchon Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nongkalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124799
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151582-1

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong

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 Photchana S. Photchana Seeda Scientist (4)
Approved by D. Changchon Dej Changchon Senior Manager

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nongkalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124799
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151582-2

Sample Number 24124799-1
Sampled Date Nov 07, 2024 9:59 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 010 2554 **Plot** A-52 **Site** SPC Star Plus Chemical Co.,Ltd
Date Analysis Commenced Nov 08, 2024
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							
Ammonia Nitrogen	mg/L	0.05	0.1	0.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong

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

Approved by Photchana S. Photchana Seeda Scientist (4)

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 24124792
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151574-1

Sample Number	24124792-1
Sampled Date	Nov 08, 2024 3:46 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2558 **Plot** A-53-1 **Site** STAR BUT (Thailand) Co.,Ltd
Date Analysis Commenced	Nov 08, 2024
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	-	2.0	120	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	264	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.7	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	292	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	50	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4)

Approved by — Dej Changchon, Senior Manager

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 24124792
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151574-1

Sampling By : Paramet Sattayakun

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 Photchana S. — Photchana Seeda, Scientist (4)

Approved by — Dej Changchon, Senior Manager

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 24124768
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151550-1

Sample Number	24124768-1
Sampled Date	Nov 08, 2024 10:00 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 005 2556 **Plot** A-4 **Site** Stanore
Date Analysis Commenced	Nov 08, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.6	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	140	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	20	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun

Technical Management Photchana S. — Photchana Seeda, Scientist (4)

Approved by — Dej Changchon, Senior Manager

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 24124768
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151550-1

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 Photchana S. — Photchana Seeda, Scientist (4)

Approved by — Dej Changchon, Senior Manager

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 24124801
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151585-1

Sample Number	24124801-1
Sampled Date	Nov 08, 2024 11:15 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2562 **Plot** A55-6 **Site** Starwood Chemical Co.,Ltd
Date Analysis Commenced	Nov 08, 2024
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	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed 2004	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.1	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1870	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Technical Management Photchana S. — Photchana Seeda, Scientist (4)

Approved by — Dej Changchon, Senior Manager

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING
No 0042
Lot ID: 24124801
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151585-1

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)
Sampling By : Paramet Sattayakun

Remark :
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"<" : 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 Photchana S. — Photchana Seeda, Scientist (4)

Approved by — Dej Changchon, Senior Manager

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124801
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151585-2

Sample Number	24124801-1
Sampled Date	Nov 08, 2024 11:15 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2562 **Plot** A55-6 **Site** Starwood Chemical Co.,Ltd
Date Analysis Commenced	Nov 08, 2024
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							
Ammonia Nitrogen	mg/L	0.05	0.1	0.4	No Standard	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun

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

Approved by Photchana S.
Photchana Seeda
Scientist (4)

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124785
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151560-1

Sample Number	24124785-1
Sampled Date	Nov 07, 2024 3:05 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 012 2556 **Plot** A-15A **Site** Stebel (Asia Pacific) Ltd
Date Analysis Commenced	Nov 07, 2024
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	-	2.0	59.5	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	138	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.9	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	284	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S.
Photchana Seeda
Scientist (4)

Approved by: Dej Changchon
Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124785
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151560-1

Sampling By : Wanlop Hunchanarn

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: Photchana S.
Photchana Seeda
Scientist (4)

Approved by: Dej Changchon
Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124776
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151615-1

Sample Number	24124776-1
Sampled Date	Nov 08, 2024 11:35 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2567 **Plot** A55-3 **Site** Stronger Hydraulic (Thailand) Co.,Ltd
Location	[illegible]
Date Analysis Commenced	Nov 08, 2024
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	-	2.0	166	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	310	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	9	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.4	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	288	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	34	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S.
Photchana Seeda
Scientist (4)

Approved by: Dej Changchon
Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124776
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151615-1

Sampling By : Paramet Sattayakun

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: Photchana S.
Photchana Seeda
Scientist (4)

Approved by: Dej Changchon
Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124764
Date Received : Nov 07, 2024
Date Reported : Nov 13, 2024
Report Number : 3151545-1

Sample Number	24124764-1
Sampled Date	Nov 07, 2024 3:19 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_006 2554 **Plot** A-36 **Site** T.I.T. International Co.,Ltd
Date Analysis Commenced	Nov 07, 2024
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	-	2.0	101	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	277	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.5	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	256	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	50	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surasit Nanapong

Technical Management: Photchana S.
Photchana Seeda
Scientist (4)

Approved by: Dej Changchon
Senior Manager

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Analysis / Test Report

TESTING
No 0042
Lot ID: 24124764
Date Received : Nov 07, 2024
Date Reported : Nov 13, 2024
Report Number : 3151545-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042
Lot ID: 24124784
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151557-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number 24124784-1
Sampled Date Nov 08, 2024 9:25 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL_009_2556 **Plot** A-8/2 **Site** Thai Kemdi Co.,Ltd
Date Analysis Commenced Nov 08, 2024
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	-	2.0	12.1	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	1.5	25	42	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.5	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	180	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	10	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042
Lot ID: 24124784
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151557-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Paramet Sattayakun

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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042
Lot ID: 24124804
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151586-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number 24124804-1
Sampled Date Nov 07, 2024 2:53 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL_008_2554 **Plot** A-26 **Site** TOP Union Co.,Ltd
Date Analysis Commenced Nov 07, 2024
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	-	2.0	72.1	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	1.5	25	178	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed. 2004	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.6	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	280	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	48	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0042
Lot ID: 24124804
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151586-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wanlop Hunchanasw, Samart Khumphlee

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: Photchana S. — Photchana Seeda, Scientist (4)
Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No 0009
Lot ID: 24124804
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151586-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number 24124804-1
Sampled Date Nov 07, 2024 2:53 PM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL_008_2554 **Plot** A-26 **Site** TOP Union Co.,Ltd
Date Analysis Commenced Nov 08, 2024
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
Metals Testing							
Zinc	mg/L	0.003	0.005	0.07	≤5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Wanlop Hunchanasw, Samart Khumphlee

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: Chanatt L. — Chanattagarn Imchom, Section Head
Approved by: Kanokkorn Anek, Assistant General Manager

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124769
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151552-1

Sample Number : 24124769-1
Sampled Date : Nov 07, 2024 9:30 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 008 2556 **Plot** A-15 **Site** TSW Wire Co.,Ltd
Date Analysis Commenced : Nov 07, 2024
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	-	2.0	70.5	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	162	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	8	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.4	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	316	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong [illegible] 323 [illegible] 0011

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible] 323 [illegible] 0028
Approved by: Dej Changchon, Senior Manager, [illegible] 323 [illegible] 0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124769
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151552-1

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible] 323 [illegible] 0028
Approved by: Dej Changchon, Senior Manager, [illegible] 323 [illegible] 0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124795
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151669-1

Sample Number : 24124795-1
Sampled Date : Nov 08, 2024 3:25 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 004 2559 **Plot** A53/5,A53/7 **Site** Umicore Autocat (Thailand) Co.,Ltd
Date Analysis Commenced : Nov 08, 2024
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	-	2.0	36.7	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	113	≤400	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.3	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	208	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	23	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible] 323 [illegible] 0028
Approved by: Dej Changchon, Senior Manager, [illegible] 323 [illegible] 0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124795
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151669-1

Sampling By : Paramet Sattayakun [illegible] 323 [illegible] 0051

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible] 323 [illegible] 0028
Approved by: Dej Changchon, Senior Manager, [illegible] 323 [illegible] 0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124816
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151599-1

Sample Number : 24124816-1
Sampled Date : Nov 07, 2024 3:26 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 005 2554 **Plot** A-22 **Site** Unity Industrial Co.,Ltd
Date Analysis Commenced : Nov 07, 2024
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	-	2.0	37.2	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	65	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.7	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	228	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	34	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong [illegible] 323 [illegible] 0011, Samart Khumphlee [illegible] 204 [illegible] 0084

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible] 323 [illegible] 0028
Approved by: Dej Changchon, Senior Manager, [illegible] 323 [illegible] 0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124816
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151599-1

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible] 323 [illegible] 0028
Approved by: Dej Changchon, Senior Manager, [illegible] 323 [illegible] 0001

Analysis / Test Report

TESTING No 0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124816
Date Received : Nov 07, 2024
Date Reported : Nov 14, 2024
Report Number : 3151599-2

Sample Number	24124816-1
Sampled Date	Nov 07, 2024 3:26 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 005 2554 **Plot** A-22 **Site** Unity Industrial Co.,Ltd
Date Analysis Commenced	Nov 08, 2024
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	0.33	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ว-0011 , Samart Khumphiew ทะเบียนเลขที่ ว-204-ว-0084

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 Chanatt L. — Chanattagam Inchom, Section Head, ทะเบียนเลขที่ ว-204-ว-0008
Approved by Kanokkorn Arek — Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124777
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151616-1

Sample Number	24124777-1
Sampled Date	Nov 08, 2024 3:40 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2567 **Plot** A.53/3 **Site** YAOKUN MACHINERY COMPANY LIMITED
Date Analysis Commenced	Nov 08, 2024
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	-	2.0	6.7	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	29	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.5	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1228	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Paramet Sattayakun ทะเบียนเลขที่ ว-323-ว-0051

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0029
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24124777
Date Received : Nov 08, 2024
Date Reported : Nov 14, 2024
Report Number : 3151616-1

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0029
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133640
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176313-1

Sample Number	24133640-1
Sampled Date	Dec 02, 2024 3:30 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2567 **Plot** A01 **Site** ACG CAPSULES (THAILAND) CO.,LTD
Date Analysis Commenced	Dec 02, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	60.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	274	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.1	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	140	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	177	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-ว-0030

Technical Management Chontichak — Chonticha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133640
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176313-1

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 Chontichak — Chonticha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133653
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176257-1

Sample Number	24133653-1
Sampled Date	Dec 02, 2024 2:05 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 005 2557 **Plot** A34/2 **Site** Asian Unity Part Co.,Ltd
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	13.7	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	80	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	28.7	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	460	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	18	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Chontichak — Chonticha Sutongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031
Approved by D. — Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133653
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176257-1

Sampling By : Pitthaya Thongtaeng [illegible]

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: Chontichak — Chonticha Suhongkoch, Scientist (3), [illegible]
Approved by: Dej Changchon, Senior Manager, [illegible]

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133655
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176260-1

Sample Number	24133655-1
Sampled Date	Dec 02, 2024 10:55 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2559 **Plot** A29/1,A29/2 **Site** Beko Thai Co.,Ltd
Location	Point 1
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	121	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	254	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.9	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	416	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible]
Approved by: Dej Changchon, Senior Manager, [illegible]

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133655
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176260-1

Sampling By : Pitthaya Thongtaeng [illegible]

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible]
Approved by: Dej Changchon, Senior Manager, [illegible]

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133656
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176264-1

Sample Number	24133656-1
Sampled Date	Dec 02, 2024 11:05 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2559 **Plot** A29/3 **Site** Beko Thai Co.,Ltd
Location	Point 2
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	32.9	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	74	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.3	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	352	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	13	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible]
Approved by: Dej Changchon, Senior Manager, [illegible]

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133656
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176264-1

Sampling By : Pitthaya Thongtaeng [illegible]

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible]
Approved by: Dej Changchon, Senior Manager, [illegible]

ALS

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133647
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176251-1

Sample Number	24133647-1
Sampled Date	Dec 02, 2024 10:30 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 013 2556 **Plot** A16A **Site** Biltech Automotive Co.,Ltd
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	69.0	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	143	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	28.9	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	316	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	26	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Chontichak — Chonticha Suhongkoch, Scientist (3), [illegible]
Approved by: Dej Changchon, Senior Manager, [illegible]

Analysis / Test Report

TESTING
No 0042
Lot ID: 24133647
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176251-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Pitthaya Thongtaeng [illegible] ว-323-ว-0030

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	
	Chontichak (signature) Chonticha Suhongkoch Scientist (3) [illegible] ว-323-ว-0031		(signature) Dej Changchon Senior Manager [illegible] ว-323-ว-0001

Analysis / Test Report

TESTING
No 0042
Lot ID: 24133668
Date Received : Dec 06, 2024
Date Reported : Dec 11, 2024
Report Number : 3176280-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24133668-1
Sampled Date	Dec 06, 2024 11:10 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_003_2556 **Plot** A-28 **Site** Caterpillar (Thailand) Limited
Location	Factory 1 Point 1
Date Analysis Commenced	Dec 06, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	182	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	463	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.2	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	348	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	149	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management		Approved by	
	Chontichak (signature) Chonticha Suhongkoch Scientist (3) [illegible] ว-323-ว-0031		(signature) Dej Changchon Senior Manager [illegible] ว-323-ว-0001

Analysis / Test Report

TESTING
No 0042
Lot ID: 24133668
Date Received : Dec 06, 2024
Date Reported : Dec 11, 2024
Report Number : 3176280-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Pitthaya Thongtaeng [illegible] ว-323-ว-0030 , Samart Khumphlee [illegible] ว-204-ว-0084

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	
	Chontichak (signature) Chonticha Suhongkoch Scientist (3) [illegible] ว-323-ว-0031		(signature) Dej Changchon Senior Manager [illegible] ว-323-ว-0001

Analysis / Test Report

TESTING
No 0008
Lot ID: 24133668
Date Received : Dec 06, 2024
Date Reported : Dec 13, 2024
Report Number : 3176280-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24133668-1
Sampled Date	Dec 06, 2024 11:10 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_003_2556 **Plot** A-28 **Site** Caterpillar (Thailand) Limited
Location	Factory 1 Point 1
Date Analysis Commenced	Dec 09, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Lead	mg/L	0.0003	0.0005	0.002	≤0.2	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 3125 B.3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng [illegible] ว-323-ว-0030 , Samart Khumphlee [illegible] ว-204-ว-0084

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	
	Saowitree N. (signature) Sawitree Nonangam Manager [illegible] ว-204-ว-0007		(signature) Karolkarn Anek Assistant General Manager [illegible] ว-204-ว-0004

Analysis / Test Report

TESTING
No 0042
Lot ID: 24133669
Date Received : Dec 06, 2024
Date Reported : Dec 11, 2024
Report Number : 3176282-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24133669-1
Sampled Date	Dec 06, 2024 11:25 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_004_2556 **Plot** A-28 **Site** Caterpillar (Thailand) Limited
Location	Factory 1 Point 2
Date Analysis Commenced	Dec 06, 2024
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	-	2.0	80.2	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	219	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.9	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	356	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	19	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management		Approved by	
	Chontichak (signature) Chonticha Suhongkoch Scientist (3) [illegible] ว-323-ว-0031		(signature) Dej Changchon Senior Manager [illegible] ว-323-ว-0001

Analysis / Test Report

TESTING
No 0042
Lot ID: 24133669
Date Received : Dec 06, 2024
Date Reported : Dec 11, 2024
Report Number : 3176282-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Pitthaya Thongtaeng [illegible] ว-323-ว-0030 , Samart Khumphlee [illegible] ว-204-ว-0084

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	
	Chontichak (signature) Chonticha Suhongkoch Scientist (3) [illegible] ว-323-ว-0031		(signature) Dej Changchon Senior Manager [illegible] ว-323-ว-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0008
Lot ID: 24133669
Date Received : Dec 06, 2024
Date Reported : Dec 13, 2024
Report Number : 3176282-2

Sample Number	24133669-1
Sampled Date	Dec 06, 2024 11:25 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_004_2556 **Plot** A-28 **Site** Caterpillar (Thailand) Limited
Location	Factory 1 Point 2
Date Analysis Commenced	Dec 09, 2024
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							
Lead	mg/L	0.0003	0.0005	0.002	≤0.2	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-ว-0030 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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: Sauwitree N. — Saowtree Noeangam, Manager, ทะเบียนเลขที่ ว-204-ว-0007
Approved by: Kanokkorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24133672
Date Received : Dec 03, 2024
Date Reported : Dec 10, 2024
Report Number : 3176287-1

Sample Number	24133672-1
Sampled Date	Dec 03, 2024 11:04 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_007_2556 **Plot** A-56/2 **Site** Caterpillar (Thailand) Limited
Location	Factory 2 Point 2
Date Analysis Commenced	Dec 03, 2024
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	-	2.0	107	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	304	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	6.9	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.0	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	396	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	124	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24133672
Date Received : Dec 03, 2024
Date Reported : Dec 10, 2024
Report Number : 3176287-1

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ว-0011 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0008
Lot ID: 24133672
Date Received : Dec 03, 2024
Date Reported : Dec 10, 2024
Report Number : 3176287-2

Sample Number	24133672-1
Sampled Date	Dec 03, 2024 11:04 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_007_2556 **Plot** A-56/2 **Site** Caterpillar (Thailand) Limited
Location	Factory 2 Point 2
Date Analysis Commenced	Dec 04, 2024
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
Metals Testing							
Lead	mg/L	0.0003	0.0005	0.002	≤0.2	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ว-0011 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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: Sauwitree N. — Saowtree Noeangam, Manager, ทะเบียนเลขที่ ว-204-ว-0007
Approved by: Kanokkorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24133649
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176254-1

Sample Number	24133649-1
Sampled Date	Dec 02, 2024 3:10 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_002_2557 **Plot** A19/2 **Site** Chuhatsu (Thailand) Ltd
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	92.8	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	368	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.9	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	192	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	32	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Chontichak — Chonticha Suttongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24133649
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176254-1

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-ว-0030

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: Chontichak — Chonticha Suttongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24133648
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176253-1

Sample Number	24133648-1
Sampled Date	Dec 02, 2024 2:15 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2557 **Plot** A34/3 **Site** Delta Hydraulics (Thailand) Ltd
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	110	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	184	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	28.8	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	320	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	46	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031

Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24133648
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176253-1

Sampling By : Pitthaya Thongluang ทะเบียนเลขที่ ว-323-ว-0030

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 Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031

Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24133684
Date Received : Dec 09, 2024
Date Reported : Dec 14, 2024
Report Number : 3176305-1

Sample Number	24133684-1
Sampled Date	Dec 09, 2024 10:50 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2564 **Plot** A53/2 **Site** Electrolux Professional (Thailand) Co.,Ltd
Date Analysis Commenced	Dec 09, 2024
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	-	2.0	18.6	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	74	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.7	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	256	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028

Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24133684
Date Received : Dec 09, 2024
Date Reported : Dec 14, 2024
Report Number : 3176305-1

Sampling By : Narunat thammesaro ทะเบียนเลขที่ ว-323-ว-0052 , Pattarapol Sawangpitam ทะเบียนเลขที่ ว-204-ว-0002

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028

Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0008
Lot ID: 24133684
Date Received : Dec 09, 2024
Date Reported : Dec 13, 2024
Report Number : 3176305-2

Sample Number	24133684-1
Sampled Date	Dec 09, 2024 10:50 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2564 **Plot** A53/2 **Site** Electrolux Professional (Thailand) Co.,Ltd
Date Analysis Commenced	Dec 10, 2024
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
Metals Testing							
Zinc	mg/L	0.003	0.005	0.54	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)
Sampling By : Narunat thammesaro ทะเบียนเลขที่ ว-323-ว-0052 , Pattarapol Sawangpitam ทะเบียนเลขที่ ว-204-ว-0002

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 Sawitree N. — Sawitree Nonangam, Manager, ทะเบียนเลขที่ ว-204-ว-0007

Approved by Karunthorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

ALS

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24133675
Date Received : Dec 09, 2024
Date Reported : Dec 14, 2024
Report Number : 3176290-1

Sample Number	24133675-1
Sampled Date	Dec 09, 2024 10:15 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_012_2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Canteen/Toilet
Date Analysis Commenced	Dec 09, 2024
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	-	2.0	25.5	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	82	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	27.6	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	304	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	19	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028

Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

TESTING No 0042
Lot ID: 24133675
Date Received : Dec 09, 2024
Date Reported : Dec 14, 2024
Report Number : 3176290-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 2 of 2

Sampling By : Narunat thammasaro [illegible] ว-323-ว-0052 , Pattarapol Sawangpaitam [illegible] ว-204-ว-0002

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: Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, [illegible] ว-323-ว-0001

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Analysis / Test Report

TESTING No 0009
Lot ID: 24133675
Date Received : Dec 09, 2024
Date Reported : Dec 13, 2024
Report Number : 3176290-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 1 of 1

Sample Number	24133675-1
Sampled Date	Dec 09, 2024 10:15 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 012 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Canteen/Toilet
Date Analysis Commenced	Dec 10, 2024
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	0.27	≤5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Narunat thammasaro [illegible] ว-323-ว-0052 , Pattarapol Sawangpaitam [illegible] ว-204-ว-0002

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: Saowitree N. — Saowitree Nonangam, Manager, [illegible] ว-204-ว-0007
Approved by: Karoliton Anek, Assistant General Manager, [illegible] ว-204-ว-0004

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Analysis / Test Report

TESTING No 0042
Lot ID: 24133680
Date Received : Dec 09, 2024
Date Reported : Dec 14, 2024
Report Number : 3176298-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 1 of 2

Sample Number	24133680-1
Sampled Date	Dec 09, 2024 9:45 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 014 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Gate 4
Date Analysis Commenced	Dec 09, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	87.9	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	233	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	28.7	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	516	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	34	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, [illegible] ว-323-ว-0001

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Analysis / Test Report

TESTING No 0042
Lot ID: 24133680
Date Received : Dec 09, 2024
Date Reported : Dec 14, 2024
Report Number : 3176298-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 2 of 2

Sampling By : Narunat thammasaro [illegible] ว-323-ว-0052 , Pattarapol Sawangpaitam [illegible] ว-204-ว-0002

Remark :
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"<" : 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: Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, [illegible] ว-323-ว-0001

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Analysis / Test Report

TESTING No 0009
Lot ID: 24133680
Date Received : Dec 09, 2024
Date Reported : Dec 13, 2024
Report Number : 3176298-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 1 of 1

Sample Number	24133680-1
Sampled Date	Dec 09, 2024 9:45 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 014 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Gate 4
Date Analysis Commenced	Dec 10, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.15	≤5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Narunat thammasaro [illegible] ว-323-ว-0052 , Pattarapol Sawangpaitam [illegible] ว-204-ว-0002

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: Saowitree N. — Saowitree Nonangam, Manager, [illegible] ว-204-ว-0007
Approved by: Karoliton Anek, Assistant General Manager, [illegible] ว-204-ว-0004

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Analysis / Test Report

TESTING No 0042
Lot ID: 24133681
Date Received : Dec 09, 2024
Date Reported : Dec 14, 2024
Report Number : 3176300-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 1 of 2

Sample Number	24133681-1
Sampled Date	Dec 09, 2024 10:05 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 013 2554 **Plot** A-33 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Toilet/WSSS Testing/Q-Ram
Date Analysis Commenced	Dec 09, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	86.7	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	269	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.1	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	680	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	46	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), [illegible] ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, [illegible] ว-323-ว-0001

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Analysis / Test Report

TESTING No 0042
Lot ID: 24133681
Date Received : Dec 09, 2024
Date Reported : Dec 14, 2024
Report Number : 3175300-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 2 of 2

Sampling By : Narunat Thammasaro [illegible] ว-323-ว-0052 , Pattarapol Sawangpalam [illegible] ว-204-ว-0002

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: Photchana S. — Photchana Seeda, Scientist (4), ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ว-323-ว-0001

Analysis / Test Report

TESTING No 0000
Lot ID: 24133681
Date Received : Dec 09, 2024
Date Reported : Dec 13, 2024
Report Number : 3175300-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 1 of 1

Sample Number	24133681-1
Sampled Date	Dec 09, 2024 10:05 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_013_2554 **Plot** A-31 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 2 Toilet/WSSS Testing/Q-Raw
Date Analysis Commenced	Dec 10, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.26	≤5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Narunat Thammasaro [illegible] ว-323-ว-0052 , Pattarapol Sawangpalam [illegible] ว-204-ว-0002

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: Sawitree N. — Sawitree Nonangam, Manager, ว-204-ว-0007
Approved by: Kanokkorn Anek, Assistant General Manager, ว-204-ว-0004

Analysis / Test Report

TESTING No 0042
Lot ID: 24133631
Date Received : Dec 09, 2024
Date Reported : Dec 14, 2024
Report Number : 3176238-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 1 of 2

Sample Number	24133631-1
Sampled Date	Dec 09, 2024 10:15 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2556 **Plot** A-34/1 **Site** Electrolux Thailand Co.,Ltd
Location	Factory 3
Date Analysis Commenced	Dec 09, 2024
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	-	2.0	146	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	264	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.8	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	484	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	78	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ว-323-ว-0001

Analysis / Test Report

TESTING No 0042
Lot ID: 24133631
Date Received : Dec 09, 2024
Date Reported : Dec 14, 2024
Report Number : 3176238-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 2 of 2

Sampling By : Narunat Thammasaro [illegible] ว-323-ว-0052

Remark :
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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: Photchana S. — Photchana Seeda, Scientist (4), ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ว-323-ว-0001

Analysis / Test Report

TESTING No 0042
Lot ID: 24133678
Date Received : Dec 09, 2024
Date Reported : Dec 14, 2024
Report Number : 3176293-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 1 of 2

Sample Number	24133678-1
Sampled Date	Dec 09, 2024 9:55 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_011_2554 **Plot** A-34A,A31A **Site** Electrolux Thailand Co.,Ltd
Location	Factory 1
Date Analysis Commenced	Dec 09, 2024
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 no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on-site) *		-	-	7.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.1	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	888	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ว-323-ว-0001

Analysis / Test Report

TESTING No 0042
Lot ID: 24133678
Date Received : Dec 09, 2024
Date Reported : Dec 14, 2024
Report Number : 3176293-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Page 2 of 2

Sampling By : Narunat Thammasaro [illegible] ว-323-ว-0052 , Pattarapol Sawangpalam [illegible] ว-204-ว-0002

Remark :
LOD : Limit of Detection
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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: Photchana S. — Photchana Seeda, Scientist (4), ว-323-ว-0028
Approved by: Dej Changchon, Senior Manager, ว-323-ว-0001

Analysis / Test Report

TESTING No 0008

Lot ID: 24133678
Date Received : Dec 09, 2024
Date Reported : Dec 13, 2024
Report Number : 3176293-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24133678-1
Sampled Date	Dec 09, 2024 9:55 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 011 2554 **Plot** A-34A,A35A **Site** Electrolux Thailand Co.,Ltd
Location	Factory 1
Date Analysis Commenced	Dec 10, 2024
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 no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.25	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Narunat thammasarn ทะเบียนเลขที่ ว-323-ส-0052 , Pattarapol Sawangsatam ทะเบียนเลขที่ ว-204-ส-0002

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 Sauwitree N. — Sauwitree Nosangam, Manager, ทะเบียนเลขที่ ว-204-ส-0007
Approved by Kanokkarn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ส-0004

Analysis / Test Report

TESTING No 0042

Lot ID: 24133651
Date Received : Dec 03, 2024
Date Reported : Dec 10, 2024
Report Number : 3176255-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24133651-1
Sampled Date	Dec 03, 2024 2:24 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2557 **Plot** A19/1 **Site** FITESACNC Co.,Ltd
Location	Point 1 (In front of the factory)
Date Analysis Commenced	Dec 03, 2024
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	-	2.0	3.8	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	43	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	27.4	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	376	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ส-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ส-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24133651
Date Received : Dec 03, 2024
Date Reported : Dec 10, 2024
Report Number : 3176255-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ส-0011

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ส-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ส-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24133652
Date Received : Dec 03, 2024
Date Reported : Dec 10, 2024
Report Number : 3176256-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24133652-1
Sampled Date	Dec 03, 2024 2:20 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 004 2557 **Plot** A19/1 **Site** FITESACNC Co.,Ltd
Location	Point 2 (side of the factory)
Date Analysis Commenced	Dec 03, 2024
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	-	2.0	63.4	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	171	≤400	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.3	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	180	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	17	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ส-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ส-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24133652
Date Received : Dec 03, 2024
Date Reported : Dec 10, 2024
Report Number : 3176256-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Surawit Narapong ทะเบียนเลขที่ ว-323-ส-0011

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ส-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ส-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24133630
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176236-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24133630-1
Sampled Date	Dec 02, 2024 11:25 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 009 2554 **Plot** A-20-21 **Site** Fuburg Industrial Co.,Ltd
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.6	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	200	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-ส-0030

Technical Management Chontichak — Chonticha Suhongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ส-0031
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ส-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24133630
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176236-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

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 Chontichak — Chonticha Sutongkoch, Scientist (3)
Approved by Dej Changthon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24133626
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176229-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number 24133626-1
Sampled Date Dec 02, 2024 9:10 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 002 2554 **Plot** A-25 **Site** Guardian Industries Rayong Co.,Ltd.
Location Point 1
Date Analysis Commenced Dec 02, 2024
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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.2	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	376	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chontichak — Chonticha Sutongkoch, Scientist (3)
Approved by Dej Changthon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24133626
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176229-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Pitthaya Thongtaeng

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 Chontichak — Chonticha Sutongkoch, Scientist (3)
Approved by Dej Changthon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24133625
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176215-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number 24133625-1
Sampled Date Dec 02, 2024 9:25 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 003 2554 **Plot** A-25 **Site** Guardian Industries Rayong Co.,Ltd.
Location Point 2
Date Analysis Commenced Dec 02, 2024
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	-	2.0	58.7	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	117	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.0	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	264	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	22	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chontichak — Chonticha Sutongkoch, Scientist (3)
Approved by Dej Changthon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24133625
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176215-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Pitthaya Thongtaeng

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 Chontichak — Chonticha Sutongkoch, Scientist (3)
Approved by Dej Changthon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24133627
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176231-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number 24133627-1
Sampled Date Dec 02, 2024 9:40 AM
Sample Description Group 2 : Customer Wastewater (WW-CT)
Contract ID RIL 004 2554 **Plot** A-25 **Site** Guardian Industries Rayong Co.,Ltd.
Location Point 3
Date Analysis Commenced Dec 02, 2024
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 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	-	2.0	32.8	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	94	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	28.7	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	452	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	20	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chontichak — Chonticha Sutongkoch, Scientist (3)
Approved by Dej Changthon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24133627
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176231-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

Sampling By : Pitthaya Thongluang

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: Chontucha Suthongkorh, Scientist (3) — Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24133632
Date Received : Dec 03, 2024
Date Reported : Dec 10, 2024
Report Number : 3176241-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

Sample Number	24133632-1
Sampled Date	Dec 03, 2024 10:25 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2556 Plot A-24 Site GULF JP NLL Company Ltd
Date Analysis Commenced	Dec 03, 2024
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	-	2.0	6.2	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	51	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	6.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.0	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1910	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Surasit Narapong

Technical Management: Photchana Seeda, Scientist (4) — Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24133632
Date Received : Dec 03, 2024
Date Reported : Dec 10, 2024
Report Number : 3176241-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

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: Photchana Seeda, Scientist (4) — Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24133658
Date Received : Dec 03, 2024
Date Reported : Dec 10, 2024
Report Number : 3176269-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

Sample Number	24133658-1
Sampled Date	Dec 03, 2024 2:13 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2562 Plot A348,A34C/1 Site Gulf NLL2 Company Limited
Location	[illegible]
Date Analysis Commenced	Dec 03, 2024
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	-	2.0	6.2	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	28	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.6	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	156	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	12	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Photchana Seeda, Scientist (4) — Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24133658
Date Received : Dec 03, 2024
Date Reported : Dec 10, 2024
Report Number : 3176269-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

Sampling By : Surasit Narapong

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: Photchana Seeda, Scientist (4) — Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING No 0042

Lot ID: 24133686
Date Received : Dec 03, 2024
Date Reported : Dec 11, 2024
Report Number : 3176301-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory / Monthly
Project Location : WHA RIL

Sample Number	24133686-1
Sampled Date	Dec 03, 2024 1:58 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2562 Plot A348,A34C/1 Site Gulf NLL2 Company Limited
Location	[illegible]
Date Analysis Commenced	Dec 03, 2024
Condition of Sample	Contained in 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	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
pH (on site) *		-	-	7.7	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	28.5	≤40	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2340	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤50	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resources and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017)
Sampling By : Surasit Narapong, Samart Khumphlai

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: Photchana Seeda, Scientist (4) — Approved by: Dej Changchon, Senior Manager

Analysis / Test Report

TESTING
No.0009

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133686
Date Received : Dec 03, 2024
Date Reported : Dec 12, 2024
Report Number : 3176303-2

Sample Number	24133686-1
Sampled Date	Dec 03, 2024 1:58 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_002_2562 **Plot** A34B,A34C/1 **Site** Gulf NLL2 Company Limited
Location	[illegible]
Date Analysis Commenced	Dec 03, 2024
Condition of Sample	Contained in 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							
Calcium	mg/L	0.03	0.05	221	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Magnesium	mg/L	0.03	0.05	39.4	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
SAR *		-	0.10	5.14	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Sodium	mg/L	0.03	0.05	316	No Standard	In-house method : STM 05-014 based on United States Environmental Protection Agency, 1994, EPA Method 200.7	Bangkok
Water Testing							
Chloride *	mg/L	0.05	0.1	0.40	No Standard	In-house method : STM 04-061 based on United States Environmental Protection Agency, 1999, EPA Method 300.1	Bangkok
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	3071	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong
Dissolved Oxygen *	mg/L	-	0.1	7.4	≥4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-O (G)	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017)
Note : Dissolved Oxygen guideline set by Environmental Impact Assessment Report of Gulf NLL2 Co., Ltd.

Sampling By : Surawit Narapeng , Samart Khumphlee

Approved by Narin Saneng
Supervisor

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Analysis / Test Report

TESTING
No 0008

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133686
Date Received : Dec 03, 2024
Date Reported : Dec 12, 2024
Report Number : 3176303-2

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

Approved by Narin Saneng
Supervisor

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133639
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176310-1

Sample Number	24133639-1
Sampled Date	Dec 02, 2024 8:55 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2566 **Plot** A16 **Site** Michelin Siam Co., Ltd.
Date Analysis Commenced	Dec 02, 2024
Condition of Sample	Contained in one amber glass bottle and three plastic bottles. Sample containers comply to pretreatment - preservation standards (APHA / USEPA)
Physical Property	Green, 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	-	2.0	7.0	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	31	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	7.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.1	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	2312	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	20	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pithaya Thongtaeng

Technical Management Chonticha Subongkoch
Scientist (3)

Approved by Dej Changchon
Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133639
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176310-1

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 Chonticha Subongkoch
Scientist (3)

Approved by Dej Changchon
Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133628
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176232-1

Sample Number	24133628-1
Sampled Date	Dec 02, 2024 10:00 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_001_2554 **Plot** A-5-7 **Site** Nawaplastic Industrial Co., Ltd
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	97.3	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	302	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	5	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.0	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	428	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	141	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pithaya Thongtaeng

Technical Management Chonticha Subongkoch
Scientist (3)

Approved by Dej Changchon
Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankha-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133628
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176232-1

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 Chonticha Subongkoch
Scientist (3)

Approved by Dej Changchon
Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongklok Rd., Nongklok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133636
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176244-1

Sample Number	24133636-1
Sampled Date	Dec 02, 2024 1:45 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 010 2556 **Plot** A-18/2 **Site** Oil States Industries (Thailand) Ltd
Location	Point 1
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	91.8	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	197	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.7	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	424	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	65	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Chonticha Subongkoch, Scientist (3) — Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongklok Rd., Nongklok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133636
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176244-1

Sampling By : Pitthaya Thongtaeng

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: Chonticha Subongkoch, Scientist (3) — Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongklok Rd., Nongklok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133637
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176246-1

Sample Number	24133637-1
Sampled Date	Dec 02, 2024 1:40 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 011 2556 **Plot** A-18/2 **Site** Oil States Industries (Thailand) Ltd
Location	Point 2
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	40.6	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	112	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	8	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.8	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	280	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	38	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management: Chonticha Subongkoch, Scientist (3) — Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongklok Rd., Nongklok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133637
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176246-1

Sampling By : Pitthaya Thongtaeng

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: Chonticha Subongkoch, Scientist (3) — Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongklok Rd., Nongklok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133666
Date Received : Dec 02, 2024
Date Reported : Dec 07, 2024
Report Number : 3176306-1

Sample Number	24133666-1
Sampled Date	Dec 02, 2024 11:40 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2564 **Plot** A55-9 **Site** S Kleber Chemical Co., Ltd
Date Analysis Commenced	Dec 02, 2024
Condition of Sample	Contained in four 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	-	2.0	23.2	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	77	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater analysis manual Environmental Engineering Association of Thailand, 4th ed. 2004	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.4	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	368	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong

Technical Management: Photchana Seeda, Scientist (4) — Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongklok Rd., Nongklok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133666
Date Received : Dec 02, 2024
Date Reported : Dec 07, 2024
Report Number : 3176306-1

Sample Number	24133666-1
Sampled Date	Dec 02, 2024 11:40 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2564 **Plot** A55-9 **Site** S Kleber Chemical Co., Ltd
Date Analysis Commenced	Dec 02, 2024
Condition of Sample	Contained in four 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							
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	53.8	≤100	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	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, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)
Sampling By : Pitthaya Thongtaeng

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: Photchana Seeda, Scientist (4) — Approved by: Dej Changchon, Senior Manager

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133666
Date Received : Dec 02, 2024
Date Reported : Dec 07, 2024
Report Number : 3175806-2

Page 1 of 1

Sample Number	24133666-1
Sampled Date	Dec 02, 2024 11:40 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 002 2564 **Plot** A55-9 **Site** S Kleber Chemical Co., Ltd
Date Analysis Commenced	Dec 02, 2024
Condition of Sample	Contained in four 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							
Ammonia Nitrogen	mg/L	0.05	0.1	47.2	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng

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

Approved by Photchana S.
Photchana Seeda
Scientist (4)

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Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133662
Date Received : Dec 02, 2024
Date Reported : Dec 07, 2024
Report Number : 3175844-1

Page 1 of 2

Sample Number	24133662-1
Sampled Date	Dec 02, 2024 1:35 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 010 2554 **Plot** A-52 **Site** SPC Star Plus Chemical Co., Ltd
Date Analysis Commenced	Dec 02, 2024
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, 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	-	2.0	<2.0	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	<25	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed., 2004	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.6	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	924	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Technical Management: Photchana S.
Photchana Seeda
Scientist (4)
ทน.ทะเบียนเลขที่ ว-323-ท-0028

Approved by: D. [signature]
Dej Changchon
Senior Manager
ทน.ทะเบียนเลขที่ ว-323-ท-0001

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Analysis / Test Report

TESTING No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133662
Date Received : Dec 02, 2024
Date Reported : Dec 07, 2024
Report Number : 3175844-1

Page 2 of 2

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทน.ทะเบียนเลขที่ ว-323-ท-0030

Remark :
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The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025

Technical Management: Photchana S.
Photchana Seeda
Scientist (4)
ทน.ทะเบียนเลขที่ ว-323-ท-0028

Approved by: D. [signature]
Dej Changchon
Senior Manager
ทน.ทะเบียนเลขที่ ว-323-ท-0001

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Client : WHA Utilities and Power Public Company Limited
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P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133662
Date Received : Dec 02, 2024
Date Reported : Dec 07, 2024
Report Number : 3175844-2

Page 1 of 1

Sample Number	24133662-1
Sampled Date	Dec 02, 2024 1:35 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 010 2554 **Plot** A-52 **Site** SPC Star Plus Chemical Co., Ltd
Date Analysis Commenced	Dec 02, 2024
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, some solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.05	0.1	0.2	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng

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

Approved by Photchana S.
Photchana Seeda
Scientist (4)

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Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133654
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176258-1

Page 1 of 2

Sample Number	24133654-1
Sampled Date	Dec 02, 2024 2:20 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 001 2558 **Plot** A 53-1 **Site** STAR BUT (Thailand) Co., Ltd
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	135	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	264	≤400	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	8	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.8	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	380	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	48	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management: Chontichak
Chonticha Sukanglach
Scientist (3)
ทน.ทะเบียนเลขที่ ว-323-ท-0031

Approved by: D. [signature]
Dej Changchon
Senior Manager
ทน.ทะเบียนเลขที่ ว-323-ท-0001

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TESTING No 0042

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222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Lot ID: 24133654
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176258-1

Page 2 of 2

Sampling By : Pitthaya Thongtaeng ทน.ทะเบียนเลขที่ ว-323-ท-0030

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Technical Management: Chontichak
Chonticha Sukanglach
Scientist (3)
ทน.ทะเบียนเลขที่ ว-323-ท-0031

Approved by: D. [signature]
Dej Changchon
Senior Manager
ทน.ทะเบียนเลขที่ ว-323-ท-0001

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Analysis / Test Report

TESTING
No.0042

Client : WHA Utilities and Power Public Company Limited
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P/O :
Project Name : Factory l Monthly
Project Location : WHA RIL

Lot ID: 24133633
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176242-1

Sample Number	24133633-1
Sampled Date	Dec 02, 2024 3:00 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 005 2556 **Plot** A-4 **Site** Starrane
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	8.6	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	28	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.8	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	160	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	8	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng

Technical Management Chontichak — Chonticha Suttongkoch, Scientist (3)
Approved by D. Chungchan — Dej Chungchon, Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory l Monthly
Project Location : WHA RIL

Lot ID: 24133633
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176242-1

Remark :
LOD : Limit of Detection
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Technical Management Chontichak — Chonticha Suttongkoch, Scientist (3)
Approved by D. Chungchan — Dej Chungchon, Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory l Monthly
Project Location : WHA RIL

Lot ID: 24133664
Date Received : Dec 02, 2024
Date Reported : Dec 07, 2024
Report Number : 3176275-1

Sample Number	24133664-1
Sampled Date	Dec 02, 2024 11:35 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2562 **Plot** AS5-6 **Site** Starwood Chemical Co., Ltd
Date Analysis Commenced	Dec 02, 2024
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	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	<25	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed.,2004	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	28.3	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1004	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	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, 24th ed., 2023, part 2540 D	Rayong

Technical Management Photchana S. — Photchana Seeda, Scientist (4)
Approved by D. Chungchan — Dej Chungchon, Senior Manager

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory l Monthly
Project Location : WHA RIL

Lot ID: 24133664
Date Received : Dec 02, 2024
Date Reported : Dec 07, 2024
Report Number : 3176275-1

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)
Sampling By : Pitthaya Thongtaeng

Remark :
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Technical Management Photchana S. — Photchana Seeda, Scientist (4)
Approved by D. Chungchan — Dej Chungchon, Senior Manager

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai-Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory l Monthly
Project Location : WHA RIL

Lot ID: 24133664
Date Received : Dec 02, 2024
Date Reported : Dec 07, 2024
Report Number : 3176275-2

Sample Number	24133664-1
Sampled Date	Dec 02, 2024 11:35 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 003 2562 **Plot** AS5-6 **Site** Starwood Chemical Co., Ltd
Date Analysis Commenced	Dec 02, 2024
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	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.05	0.1	0.3	No Standard	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng

Remark :
LOD : Limit of Detection
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Approved by Photchana S. — Photchana Seeda, Scientist (4)

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
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P/O :
Project Name : Factory l Monthly
Project Location : WHA RIL

Lot ID: 24133646
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176250-1

Sample Number	24133646-1
Sampled Date	Dec 02, 2024 10:25 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 012 2556 **Plot** A-15A **Site** Siebel (Asia Pacific) Ltd
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	52.4	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	106	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.6	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	288	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	17	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Chontichak — Chonticha Suttongkoch, Scientist (3)
Approved by D. Chungchan — Dej Chungchon, Senior Manager

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24133646
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176250-1

Sampling By : Pitthaya Thongtaeng ว-323-ง-0030

Remark :
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Technical Management Chonticha Sutongkoch, Scientist (3), [illegible] ว-323-ง-0031
Approved by Dej Changchon, Senior Manager, [illegible] ว-323-ง-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24133641
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176315-1

Sample Number	24133641-1
Sampled Date	Dec 02, 2024 11:50 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_002_2567 **Plot** A55-3 **Site** Stonger Hydraulic (Thailand) Co.,Ltd
Location	[illegible]
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	100	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	208	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	7	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH (on site) *		-	-	8.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.0	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	300	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	23	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.

Technical Management Chonticha Sutongkoch, Scientist (3), [illegible] ว-323-ง-0031
Approved by Dej Changchon, Senior Manager, [illegible] ว-323-ง-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24133641
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176315-1

Sampling By : Pitthaya Thongtaeng ว-323-ง-0030

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 Chonticha Sutongkoch, Scientist (3), [illegible] ว-323-ง-0031
Approved by Dej Changchon, Senior Manager, [illegible] ว-323-ง-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24133629
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176234-1

Sample Number	24133629-1
Sampled Date	Dec 02, 2024 2:45 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_006_2554 **Plot** A-36 **Site** T.T.T International Co.,Ltd
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	151	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	356	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	6	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	31.3	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	532	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	78	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ว-323-ง-0030

Technical Management Chonticha Sutongkoch, Scientist (3), [illegible] ว-323-ง-0031
Approved by Dej Changchon, Senior Manager, [illegible] ว-323-ง-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24133629
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176234-1

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 Chonticha Sutongkoch, Scientist (3), [illegible] ว-323-ง-0031
Approved by Dej Changchon, Senior Manager, [illegible] ว-323-ง-0001

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

TESTING No 0042
Lot ID: 24133645
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176249-1

Sample Number	24133645-1
Sampled Date	Dec 02, 2024 10:10 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_009_2556 **Plot** A-8/2 **Site** The Hemck Co.,Ltd
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	17.7	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500-O G	Rayong
COD	mg/L	15	25	42	≤400	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500-H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	27.6	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	180	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	14	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Chonticha Sutongkoch, Scientist (3), [illegible] ว-323-ง-0031
Approved by Dej Changchon, Senior Manager, [illegible] ว-323-ง-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24133645
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176249-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongklok Rd., Nongklok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323 ร-0030

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: Chontichak — Chonticha Sukonglach, Scientist (3), ทะเบียนเลขที่ ว-323 ร-0031
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 ร-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24133667
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176278-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongklok Rd., Nongklok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number : 24133667-1
Sampled Date : Dec 02, 2024 10:15 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 008 2554 **Plot** A-26 **Site** TOP Union Co.,Ltd
Date Analysis Commenced : Dec 02, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	37.1	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	110	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023 part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand 4th ed.,2004	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	28.9	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	332	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	26	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323 ร-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 ร-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24133667
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176278-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongklok Rd., Nongklok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323 ร-0030 , Samart Khumphlee ทะเบียนเลขที่ ว-204 ร-0084

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: Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323 ร-0028
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 ร-0001

Analysis / Test Report

TESTING No 0008

Lot ID: 24133667
Date Received : Dec 02, 2024
Date Reported : Dec 10, 2024
Report Number : 3176278-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongklok Rd., Nongklok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number : 24133667-1
Sampled Date : Dec 02, 2024 10:15 AM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 008 2554 **Plot** A-26 **Site** TOP Union Co.,Ltd
Date Analysis Commenced : Dec 03, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.10	≤5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323 ร-0030 , Samart Khumphlee ทะเบียนเลขที่ ว-204 ร-0084

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: Saowitree N. — Saowitree Niwangam, Manager, ทะเบียนเลขที่ ว-204 ร-0007
Approved by: Kanokkorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204 ร-0004

Analysis / Test Report

TESTING No 0042

Lot ID: 24133634
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176243-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongklok Rd., Nongklok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number : 24133634-1
Sampled Date : Dec 02, 2024 1:20 PM
Sample Description : Group 2 : Customer Wastewater (WW-CT)
Contract ID : RIL 008 2556 **Plot** A-15 **Site** TSN Wire Co.,Ltd
Date Analysis Commenced : Dec 02, 2024
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	-	2.0	46.4	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	102	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.5	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	224	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	13	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323 ร-0030

Technical Management: Chontichak — Chonticha Sukonglach, Scientist (3), ทะเบียนเลขที่ ว-323 ร-0031
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 ร-0001

Analysis / Test Report

TESTING No 0042

Lot ID: 24133634
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176243-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nongklok Rd., Nongklok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

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: Chontichak — Chonticha Sukonglach, Scientist (3), ทะเบียนเลขที่ ว-323 ร-0031
Approved by: Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323 ร-0001

ALS

Analysis / Test Report

TESTING
No 0042
Lot ID: 24133657
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176267-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24133657-1
Sampled Date	Dec 02, 2024 2:35 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 004 2559 **Plot** A53/1,A53/7 **Site** Umicore Autocat (Thailand) Co.,Ltd
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	50.9	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	96	≤400	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	30.8	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	292	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	22	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant (Expansion and Remaining Area after July 2011)

Technical Management Chontichak — Chontecha Sultongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0042
Lot ID: 24133657
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176267-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-ว-0030

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 Chontichak — Chontecha Sultongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0042
Lot ID: 24133679
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176295-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24133679-1
Sampled Date	Dec 02, 2024 11:20 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 005 2554 **Plot** A-22 **Site** Unity Industrial Co.,Ltd
Date Analysis Commenced	Dec 02, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	94.7	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	250	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	29.9	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	272	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	13	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-ว-0030 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

Technical Management Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0042
Lot ID: 24133679
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176295-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

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 Photchana S. — Photchana Seeda, Scientist (4), ทะเบียนเลขที่ ว-323-ว-0028
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

ALS

Analysis / Test Report

TESTING
No 0009
Lot ID: 24133679
Date Received : Dec 02, 2024
Date Reported : Dec 10, 2024
Report Number : 3176295-2

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24133679-1
Sampled Date	Dec 02, 2024 11:20 AM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL 005 2554 **Plot** A-22 **Site** Unity Industrial Co.,Ltd
Date Analysis Commenced	Dec 03, 2024
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 turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.17	≤5	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-ว-0030 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

Remark :
LOD : Limit of Detection
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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 Sauwitree N. — Sauwitree Nirangam, Manager, ทะเบียนเลขที่ ว-204-ว-0007
Approved by Kanokkorn Anek, Assistant General Manager, ทะเบียนเลขที่ ว-204-ว-0004

ALS

Analysis / Test Report

TESTING
No 0042
Lot ID: 24133642
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176318-1

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Bankhai Nonglalok Rd., Nonglalok, Bankhai, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location : WHA RIL

Sample Number	24133642-1
Sampled Date	Dec 02, 2024 2:30 PM
Sample Description	Group 2 : Customer Wastewater (WW-CT)
Contract ID	RIL_003 2567 **Plot** A53/3 **Site** YAOKUN MACHINERY COMPANY LIMITED
Date Analysis Commenced	Dec 02, 2024
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	-	2.0	6.9	≤500	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	15	25	28	≤750	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, 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, 24th ed., 2023, part 4500 - H (B)	Rayong
Residual Free Chlorine *	mg/L	-	0.1	<0.1	≤1	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 4500-Cl (F)	Rayong
Temperature *	Degree C	-	-	32.0	≤45	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1060	≤3000	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	12	≤200	Standard Methods for the Examination of Water and Wastewater APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Standard of WHA Rayong Industrial Land, Maximum levels for wastewater discharging to central wastewater treatment plant.
Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-ว-0030

Technical Management Chontichak — Chontecha Sultongkoch, Scientist (3), ทะเบียนเลขที่ ว-323-ว-0031
Approved by Dej Changchon, Senior Manager, ทะเบียนเลขที่ ว-323-ว-0001

Analysis / Test Report

TESTING
No 0042

Client : WHA Utilities and Power Public Company Limited
222 Moo 11, Banklha-Nongplalok Rd., Nongplalok, Banklha, Rayong Thailand 21120
P/O :
Project Name : Factory I Monthly
Project Location: WHA RIL

Lot ID: 24133642
Date Received : Dec 02, 2024
Date Reported : Dec 09, 2024
Report Number : 3176318-1

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 Chontichak
Chontichak Suthongkach
Scientist (3)
หมายเลขที่ ว-323 ว-0031

Approved by
Dej Changchon
Senior Manager
หมายเลขที่ ว-323 ว-0001

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