



TEST REPORT

Analysis No. : R22-1888

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2207-WW0107 = black turbid/high black sediment,

Flow Rate = 11,809 m³/Day

Report Date : 12/07/22

Received Date : 06/07/22

Analysis Date : 06-11/07/22

Sampling Date * : 05/07/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/July/01

Item	Parameter	Unit	Method	Result	Standard
				2207-WW0107	
				ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	32.2	45
2	pH *	-	Electrometric Method (SM 4500 B)	7.32	5.5-9.0
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	25.8	200
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,134	3,000
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	24	500

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705333 UTM 1448105

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

12 / 07 / 22



Mrs. Pornpip Pethshee

Laboratory Manager

12 / 07 / 22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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Analysis No. : R22-1888

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอสรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2207-WW0108 = yellow turbid/high yellow sediment,

Flow Rate = 6,052 m³/Day

Report Date : 12/07/22

Received Date : 06/07/22

Analysis Date : 06-11/07/22

Sampling Date * : 05/07/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/July/01

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2207-WW0108	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	32.5	40
2	pH *	-	Electrometric Method (SM 4500 B)	7.62	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	33	300
	Color (pH 7) *	ADMI		28	300
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	1.00	-
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	5.3	50
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,430	3,000
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	7	20
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	5
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	-
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	12.70	-
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	2.40	-
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.002	-
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.003	0.2
14	Phenol & Cresols *	mg/L	LLE, GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	375.0	-
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0056	0.25
20	Se *	mg/L		< 0.0005	0.02
21	Ba	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 F and part 3120 B	< 0.05	1.0
22	Cd	mg/L		< 0.02	0.03
23	Cr	mg/L		< 0.02	-
24	Cu	mg/L		< 0.05	2.0
25	Mn	mg/L		0.28	5.0
26	Ni	mg/L		0.08	1.0
27	Pb	mg/L		0.04	0.2
28	Zn	mg/L		0.24	5.0

continue

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Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 12/07/22
Received Date : 06/07/22
Analysis Date : 06-11/07/22
Sampling Date * : 05/07/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/July/01

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2207-WW0108	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	5.4×10^4	-
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable
31	Radioactive Substance *** - Gross Alpha - Gross Beta	Bq/L Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018 0.634 ± 0.038	- -
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705194 UTM 1448128

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

12/07/22



Mrs. Pomtip Pethshee

Laboratory Manager

12/07/22

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TEST REPORT

Analysis No. : R22-1976

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2207-WW0399 = yellow turbid/high black sediment/covered with oil slick/foul smell,

Flow Rate = 12,315 m³/Day

Report Date : 19/07/22

Received Date : 13/07/22

Analysis Date : 13-18/07/22

Sampling Date * : 12/07/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/July/02

Item	Parameter	Unit	Method	Result	Standard
				2207-WW0399	
				ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.9	45
2	pH *	-	Electrometric Method (SM 4500 B)	7.66	5.5-9.0
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	26.6	200
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,014	3,000
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	24	500

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705230 UTM 1448114

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

19, 07, 22



Mrs. Porntip Pethshee

Laboratory Manager

19, 07, 22

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TEST REPORT

Analysis No. : R22-1976

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2207-WW0400 = yellow turbid/high black sediment ,

Flow Rate = 3,779 m³/Day

Report Date : 19/07/22

Received Date : 13/07/22

Analysis Date : 13-18/07/22

Sampling Date * : 12/07/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/July/02

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2207-WW0400	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.0	40
2	pH *	-	Electrometric Method (SM 4500 B)	7.46	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	25	300
	Color (pH 7) *	ADMI		21	300
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.80	-
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	4.9	50
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,083	3,000
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	9	20
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	5
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	7.04	-
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	1.79	-
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.002	-
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.002	0.2
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	276.0	-
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0037	0.25
20	Se *	mg/L		< 0.0005	0.02
21	Ba	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 F and part 3120 B	< 0.05	1.0
22	Cd	mg/L		< 0.02	0.03
23	Cr	mg/L		0.03	-
24	Cu	mg/L		< 0.05	2.0
25	Mn	mg/L		0.21	5.0
26	Ni	mg/L		0.05	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		0.29	5.0

continue

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Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 19/07/22
Received Date : 13/07/22
Analysis Date : 13-21/07/22
Sampling Date * : 12/07/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/July/02

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2207-WW0400 ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	9.2 x 10 ⁴	-
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable
31	Radioactive Substance ***				
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-
	- Gross Beta	Bq/L		0.626 ± 0.038	-
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705190 UTM 1448130

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ชงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

19/07/22



Mrs. Pornpip Pethshee

Laboratory Manager

19/07/22

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TEST REPORT

Analysis No. : R22-2027

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2207-WW0494 = yellow turbid/high black sediment/covered with oil slick/foul smell,

Flow Rate = 9,346 m³/Day

Report Date : 27/07/22

Received Date : 20/07/22

Analysis Date : 20-25/07/22

Sampling Date * : 19/07/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/July/03

Item	Parameter	Unit	Method	Result	Standard
				2207-WW0494	
				ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	33.6	45
2	pH *	-	Electrometric Method (SM 4500 B)	7.33	5.5-9.0
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	21.8	200
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,219	3,000
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	35	500

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705203 UTM 1448162

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Ms. Wareerut Prachumdaeng

Chief of Laboratory



Mrs. Porntip Pethshee

Laboratory Manager

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TEST REPORT

Analysis No. : R22-2027
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอสัตหีบ จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1
Sample Conditions : 2207-WW0495 = light yellow/slight black sediment,
Flow Rate = 5,210 m³/Day

Report Date : 27/07/22
Received Date : 20/07/22
Analysis Date : 20-25/07/22
Sampling Date * : 19/07/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/July/03

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2207-WW0495	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	32.7	40
2	pH *	-	Electrometric Method (SM 4500 B)	7.43	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	42	300
	Color (pH 7) *	ADMI		35	300
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	1.40	-
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	3.4	50
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	2,039	3,000
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	6	20
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	5
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	13.60	-
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	2.02	-
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.002	-
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.002	0.2
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	527.2	-
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0046	0.25
20	Se *	mg/L		< 0.0005	0.02
21	Ba	mg/L		< 0.05	1.0
22	Cd	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 F and part 3120 B	< 0.02	0.03
23	Cr	mg/L		0.02	-
24	Cu	mg/L		< 0.05	2.0
25	Mn	mg/L		0.33	5.0
26	Ni	mg/L		0.09	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		0.23	5.0

continue

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Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 27/07/22
Received Date : 20/07/22
Analysis Date : 20/07-01/08/22
Sampling Date * : 19/07/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/July/03

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2207-WW0495	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	9.2×10^4	-
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable
31	Radioactive Substance ***				
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-
	- Gross Beta	Bq/L		0.961 ± 0.053	-
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705185 UTM 1448110

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Ms. Wareerut Prachumdaeng

Chief of Laboratory



Mrs. Pornpip Pethshee

Laboratory Manager

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2111

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง /

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2207-WW0647 = black turbid/high black sediment/covered with oil slick/foul smell,

Flow Rate = 13,517 m³/Day

Report Date : 03/08/22

Received Date : 27/07/22

Analysis Date : 27/07-01/08/22

Sampling Date * : 26/07/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/July/04

Item	Parameter	Unit	Method	Result	Standard
				2207-WW0647	
				ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.8	45
2	pH *	-	Electrometric Method (SM 4500 B)	6.65	5.5-9.0
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	26.7	200
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	947	3,000
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	30	500

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705333 UTM 1448105

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

03/08/22



Mrs. Porntip Pethshee

Laboratory Manager

03/08/22



TEST REPORT

Analysis No. : R22-2111
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอสัตหีบ จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1
Sample Conditions : 2207-WW0648 = yellow turbid/high black sediment,
Flow Rate = 6,157 m³/Day

Report Date : 03/08/22
Received Date : 27/07/22
Analysis Date : 27/07-02/08/22
Sampling Date * : 26/07/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/July/04

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2207-WW0648	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.6	40
2	pH *	-	Electrometric Method (SM 4500 B)	6.84	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	38	300
	Color (pH 7) *	ADMI		43	300
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.80	-
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	5.7	50
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,247	3,000
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	8	20
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	5
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	8.83	-
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	2.58	-
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.001	-
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.001	0.2
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	313.8	-
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0049	0.25
20	Se *	mg/L		< 0.0005	0.02
21	Ba	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 F and part 3120 B	< 0.05	1.0
22	Cd	mg/L		< 0.02	0.03
23	Cr	mg/L		< 0.02	-
24	Cu	mg/L		< 0.05	2.0
25	Mn	mg/L		0.29	5.0
26	Ni	mg/L		0.07	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		0.30	5.0

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2111
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 03/08/22
Received Date : 27/07/22
Analysis Date : 27/07-03/08/22
Sampling Date * : 26/07/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/July/04

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2207-WW0648	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	$> 1.6 \times 10^5$	-
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable
31	Radioactive Substance ***				
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-
	- Gross Beta	Bq/L		0.645 ± 0.039	-
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"
*** Subcontractor "Not TISI Accredited"
N.D. = Not Detectable (Less than 0.10 µg/L)
: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705144 UTM 1448128
Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017
(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิศักดิ์
(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual
Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Ms. Wareerut Prachumdaeng
Chief of Laboratory
03/08/22



Mrs. Pornpip Pethshee
Laboratory Manager
03/08/22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2149

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2208-WW0049 = yellow turbid/high black sediment/covered with oil slick/foul smell,

Flow Rate = 11,794 m³/Day

Report Date : 09/08/22

Received Date : 03/08/22

Analysis Date : 03-08/08/22

Sampling Date * : 02/08/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/Aug/01

Item	Parameter	Unit	Method	Result	Standard
				2208-WW0049	
				ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.0	45
2	pH *	-	Electrometric Method (SM 4500 B)	7.61	5.5-9.0
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	52.4	200
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,024	3,000
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	22	500

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705330 UTM 1448106

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

09/08/22



Mrs. Pornpip Pethshee

Laboratory Manager

09/08/22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2149
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1
Sample Conditions : 2208-WW0050 = clear/slight black sediment,
Flow Rate = 5,807 m³/Day

Report Date : 09/08/22
Received Date : 03/08/22
Analysis Date : 03-08/08/22
Sampling Date * : 02/08/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/Aug/01

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2208-WW0050	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.5	40
2	pH *	-	Electrometric Method (SM 4500 B)	7.51	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	49	300
	Color (pH 7) *	ADMI		40	300
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.80	-
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	7.7	50
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,010	3,000
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	9	20
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	5
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	4.97	-
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	2.27	-
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	-
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	0.2
14	Phenol & Cresols *	mg/L	LLE, GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	286.0	-
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0044	0.25
20	Se *	mg/L		< 0.0005	0.02
21	Ba	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 F and part 3120 B	< 0.05	1.0
22	Cd	mg/L		< 0.02	0.03
23	Cr	mg/L		< 0.02	-
24	Cu	mg/L		< 0.05	2.0
25	Mn	mg/L		0.23	5.0
26	Ni	mg/L		0.07	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		0.31	5.0

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-2149
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอสัตหีบ จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 09/08/22
Received Date : 03/08/22
Analysis Date : 03-09/08/22
Sampling Date * : 02/08/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/Aug/01

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2208-WW0050	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	7.9×10^3	-
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable
31	Radioactive Substance ***				
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-
	- Gross Beta	Bq/L		0.611 ± 0.037	-
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"
*** Subcontractor "Not TISI Accredited"
N.D. = Not Detectable (Less than 0.10 µg/L)
: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705189 UTM 1448130
Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017
(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรรณสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิศักดิ์
(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual
Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

09/08/22



Mrs. Pornpip Pethshee

Laboratory Manager

09/08/22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2232

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2208-WW0341 = gray turbid/high black sediment/covered with oil slick/foul smell,
Flow Rate = 8,672 m³/Day

Report Date : 31/08/22

Received Date : 10/08/22

Analysis Date : 10-15/08/22

Sampling Date * : 09/08/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/Aug/02

Item	Parameter	Unit	Method	Result	Standard
				2208-WW0341	
				ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.5	45
2	pH *	-	Electrometric Method (SM 4500 B)	8.12	5.5-9.0
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	31.6	200
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,008	3,000
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	44	500

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705332 UTM 1448108

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

31/08/22



Mrs. Pornpip Pethshee

Laboratory Manager

31/08/22



TEST REPORT

Analysis No. : R22-2232
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1
Sample Conditions : 2208-WW0342 = yellow turbid/slight black sediment,
Flow Rate = 1,519 m³/Day

Report Date : 31/08/22
Received Date : 10/08/22
Analysis Date : 10-17/08/22
Sampling Date * : 09/08/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/Aug/02

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2208-WW0342	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.6	40
2	pH *	-	Electrometric Method (SM 4500 B)	8.29	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	29	300
	Color (pH 7) *	ADMI		20	300
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	1.50	-
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	4.7	50
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,481	3,000
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	6	20
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	5
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	-
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	7.81	-
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	2.97	-
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	-
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	0.2
14	Phenol & Cresols *	mg/L	LLE, GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	539.6	-
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0049	0.25
20	Se *	mg/L		< 0.0005	0.02
21	Ba	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 F and part 3120 B	< 0.05	1.0
22	Cd	mg/L		< 0.02	0.03
23	Cr	mg/L		< 0.02	-
24	Cu	mg/L		< 0.05	2.0
25	Mn	mg/L		0.40	5.0
26	Ni	mg/L		0.13	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		0.35	5.0

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-2232
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 31/08/22
Received Date : 10/08/22
Analysis Date : 10-22/08/22
Sampling Date * : 09/08/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/Aug/02

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2208-WW0342 ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	9.2×10^4	-
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable
31	Radioactive Substance ***				
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-
	- Gross Beta	Bq/L		0.972 ± 0.053	-
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"
*** Subcontractor "Not TISI Accredited"
N.D. = Not Detectable (Less than 0.10 µg/L)
: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705191 UTM 1448130
Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017
(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิศุทธิ์ศักดิ์
(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual
Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Ms. Wareerut Prachumdaeng
Chief of Laboratory
31/08/22



Mrs. Pornpip Pethshee
Laboratory Manager
31/08/22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2318

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอสัตหีบ จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2208-WW0494 = yellow turbid/high black sediment/covered with oil slick/foul smell,

Flow Rate = 11,641 m³/Day

Report Date : 23/08/22

Received Date : 17/08/22

Analysis Date : 17-22/08/22

Sampling Date * : 16/08/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/Aug/03


Item	Parameter	Unit	Method	Result	Standard
				2208-WW0494	
				ก่อนเข้ระบบบำบัดน้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.2	45
2	pH *	-	Electrometric Method (SM 4500 B)	8.17	5.5-9.0
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	45.1	200
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	900	3,000
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	35	500

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"


: ก่อนเข้ระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705329 UTM 1448107

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)


Ms. Wareerut Prachumdaeng
Chief of Laboratory
23 / 08 / 22




Mrs. Pornpip Pethshee
Laboratory Manager
23 / 08 / 22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2318

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2208-WW0495 = light yellow/slight black sediment,

Flow Rate = 4,536 m³/Day

Report Date : 23/08/22

Received Date : 17/08/22

Analysis Date : 17-22/08/22

Sampling Date * : 16/08/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/Aug/03

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2208-WW0495	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.4	40
2	pH *	-	Electrometric Method (SM 4500 B)	7.65	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	33	300
	Color (pH 7) *	ADMI		25	300
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.80	-
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	8.0	50
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,083	3,000
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	7	20
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	5
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	-
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	5.09	-
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	2.34	-
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	-
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	0.2
14	Phenol & Cresols *	mg/L	LLE, GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	268.1	-
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0039	0.25
20	Se *	mg/L		< 0.0005	0.02
21	Ba	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 F and part 3120 B	< 0.05	1.0
22	Cd	mg/L		< 0.02	0.03
23	Cr	mg/L		< 0.02	-
24	Cu	mg/L		< 0.05	2.0
25	Mn	mg/L		0.26	5.0
26	Ni	mg/L		0.06	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		0.33	5.0

continue

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

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TEST REPORT

Analysis No. : R22-2318
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 23/08/22
Received Date : 17/08/22
Analysis Date : 17-22/08/22
Sampling Date * : 16/08/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/Aug/03

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2208-WW0495 ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	5.4 x 10 ⁴	-
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable
31	Radioactive Substance *** - Gross Alpha - Gross Beta	Bq/L Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018 0.550 ± 0.035	- -
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"
*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705187 UTM 1448128

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ชงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

23, 08, 22



Mrs. Pornpip Pethshee

Laboratory Manager

23, 08, 22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2378

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2208-WW0609 = black turbid/high black sediment/covered with oil slick/foul smell,

Flow Rate = 11,038 m³/Day

Report Date : 30/08/22

Received Date : 24/08/22

Analysis Date : 24-29/08/22

Sampling Date * : 23/08/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/Aug/04

Item	Parameter	Unit	Method	Result	Standard
				2208-WW0609	
				ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	33.3	45
2	pH *	-	Electrometric Method (SM 4500 B)	7.57	5.5-9.0
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	198.1	200
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,007	3,000
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	74	500

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705330 UTM 1448106

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

30/08/22



Mrs. Pornpip Pethshee

Laboratory Manager

30/08/22



TEST REPORT

Analysis No. : R22-2378

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอสัตหีบ จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2208-WW0610 = yellow turbid/slight black sediment,

Flow Rate = 5,662 m³/Day

Report Date : 30/08/22

Received Date : 24/08/22

Analysis Date : 24-29/08/22

Sampling Date * : 23/08/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/Aug/04

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2208-WW0610	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	33.4	40
2	pH *	-	Electrometric Method (SM 4500 B)	7.65	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	25	300
	Color (pH 7) *	ADMI		19	300
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	1.00	-
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	4.1	50
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,330	3,000
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	11	20
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	5
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	14.85	-
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	2.85	-
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	-
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	0.2
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	362.1	-
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0049	0.25
20	Se *	mg/L		< 0.0005	0.02
21	Ba	mg/L		< 0.05	1.0
22	Cd	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 F and part 3120 B	< 0.02	0.03
23	Cr	mg/L		< 0.02	-
24	Cu	mg/L		< 0.05	2.0
25	Mn	mg/L		0.14	5.0
26	Ni	mg/L		0.08	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		0.22	5.0

continue

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

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TEST REPORT

Analysis No. : R22-2378
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 30/08/22
Received Date : 24/08/22
Analysis Date : 24-31/08/22
Sampling Date * : 23/08/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/Aug/04

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2208-WW0610	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	1.3×10^4	-
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable
31	Radioactive Substance ***				
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-
	- Gross Beta	Bq/L		0.710 ± 0.042	-
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705189 UTM 1448130

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 รชชช พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

30, 08, 22



Mrs. Porntip Pethshee

Laboratory Manager

30, 08, 22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2449

Report Date : 12/09/22

Customer : Technical Division of Thai Environmental Technic Limited

Received Date : 31/08/22

For นิคมอุตสาหกรรมแหลมฉบัง

Analysis Date : 31/08-05/09/22

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Sampling Date * : 30/08/22

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sampling By * : TET

Sample Conditions : 2208-WW0756 = black turbid/high black sediment/covered with oil slick/foul smell,

Type of Sample : Wastewater

Flow Rate = 10,031 m³/Day

Job No. : S650342/Aug/05

Item	Parameter	Unit	Method	Result	Standard
				2208-WW0756	
				ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.8	45
2	pH *	-	Electrometric Method (SM 4500 B)	7.11	5.5-9.0
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	19.6	200
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,098	3,000
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	52	500

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705332 UTM 1448106

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

12.09.22



Mrs. Pornpip Pethshee

Laboratory Manager

12.09.22



TEST REPORT

Analysis No. : R22-2449

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2208-WW0757 = yellow turbid/high black sediment/covered with oil slick,
Flow Rate = 5,793 m³/Day

Report Date : 12/09/22

Received Date : 31/08/22

Analysis Date : 31/08-05/09/22

Sampling Date * : 30/08/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/Aug/05

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2208-WW0757	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.5	40
2	pH *	-	Electrometric Method (SM 4500 B)	7.26	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	24	300
	Color (pH 7) *	ADMI		22	300
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.70	-
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	6.3	50
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	862	3,000
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	6	20
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	5
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	9.83	-
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	2.17	-
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.002	-
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.002	0.2
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	272.6	-
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0035	0.25
20	Se *	mg/L		< 0.0005	0.02
21	Ba	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 F and part 3120 B	< 0.05	1.0
22	Cd	mg/L		< 0.02	0.03
23	Cr	mg/L		< 0.02	-
24	Cu	mg/L		< 0.05	2.0
25	Mn	mg/L		0.21	5.0
26	Ni	mg/L		0.06	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		0.26	5.0

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-2449
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอสัตหีบ จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 12/09/22
Received Date : 31/08/22
Analysis Date : 31/08-06/09/22
Sampling Date * : 30/08/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/Aug/05

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2208-WW0757 ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	9.2×10^2	-
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable
31	Radioactive Substance ***				
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-
	- Gross Beta	Bq/L		0.489 ± 0.033	-
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"
*** Subcontractor "Not TISI Accredited"
N.D. = Not Detectable (Less than 0.10 µg/L)
: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705190 UTM 1448129
Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017
(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ชงชัย พรรณสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิตักดี
(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual
Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

12/09/22



Mrs. Pornpip Pethshee

Laboratory Manager

12/09/22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2513

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2209-WW0167 = black turbid/high black sediment/covered with oil slick/foul smell,

Flow Rate = 11,845 m³/Day

Report Date : 13/09/22

Received Date : 07/09/22

Analysis Date : 07-12/09/22

Sampling Date * : 06/09/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/Sep/01

Item	Parameter	Unit	Method	Result	Standard
				2209-WW0167	
				ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.7	45
2	pH *	-	Electrometric Method (SM 4500 B)	7.57	5.5-9.0
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	80.1	200
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	914	3,000
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	45	500

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705331 UTM 1448108

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Ms. Wareerut Prachundaeng

Chief of Laboratory

13, 09, 22



Mrs. Pornpip Pethshee

Laboratory Manager

13, 09, 22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-2513
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1
Sample Conditions : 2209-WW0168 = light yellow/slight white sediment,
Flow Rate = 7,294 m³/Day

Report Date : 13/09/22
Received Date : 07/09/22
Analysis Date : 07-12/09/22
Sampling Date * : 06/09/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/Sep/01

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2209-WW0168	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.2	40
2	pH *	-	Electrometric Method (SM 4500 B)	7.96	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	24	300
	Color (pH 7) *	ADMI		21	300
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.70	-
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	8.4	50
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	936	3,000
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	4	20
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	5
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	17.47	-
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	0.57	-
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	-
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	0.2
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	225.4	-
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0017	0.25
20	Se *	mg/L		< 0.0005	0.02
21	Ba	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 F and part 3120 B	< 0.05	1.0
22	Cd	mg/L		< 0.02	0.03
23	Cr	mg/L		< 0.02	-
24	Cu	mg/L		< 0.05	2.0
25	Mn	mg/L		0.28	5.0
26	Ni	mg/L		0.07	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		0.25	5.0

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-2513
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 13/09/22
Received Date : 07/09/22
Analysis Date : 07-16/09/22
Sampling Date * : 06/09/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/Sep/01

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2209-WW0168	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	1.6×10^5	-
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable
31	Radioactive Substance ***				
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1	< 0.018	-
	- Gross Beta	Bq/L	Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	0.501 ± 0.033	-
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705189 UTM 1448129

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ของชัย พรหมสวัสดิ์, วิทยาลัยเกษตรและเทคโนโลยีสุพรรณบุรี

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

13/09/22



Mrs. Pornpip Pethshee

Laboratory Manager

13/09/22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-2615

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2209-WW0399 = black turbid/high black sediment/covered with oil slick/foul smell,

Flow Rate = 13,659 m³/Day

Report Date : 20/09/22

Received Date : 14/09/22

Analysis Date : 14-19/09/22

Sampling Date * : 13/09/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/Sep/02

Item	Parameter	Unit	Method	Result	Standard
				2209-WW0399	
				ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.4	45
2	pH *	-	Electrometric Method (SM 4500 B)	7.37	5.5-9.0
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	18.9	200
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	860	3,000
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	50	500

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705252 UTM 1448131

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

20/09/22



Mrs. Pornpip Pethshee

Laboratory Manager

20/09/22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2615

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2209-WW0400 = yellow turbid/high black sediment/covered with oil slick,

Flow Rate = 7,764 m³/Day

Report Date : 20/09/22

Received Date : 14/09/22

Analysis Date : 14-19/09/22

Sampling Date * : 13/09/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/Sep/02

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2209-WW0400	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.6	40
2	pH *	-	Electrometric Method (SM 4500 B)	7.40	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	25	300
	Color (pH 7) *	ADMI		20	300
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.70	-
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	4.3	50
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	892	3,000
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	8	20
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	5
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	-
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	10.67	-
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	1.46	-
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.001	-
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.001	0.2
14	Phenol & Cresols *	mg/L	LLE, GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	230.8	-
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0038	0.25
20	Se *	mg/L		< 0.0005	0.02
21	Ba	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 F and part 3120 B	< 0.05	1.0
22	Cd	mg/L		< 0.02	0.03
23	Cr	mg/L		< 0.02	-
24	Cu	mg/L		< 0.05	2.0
25	Mn	mg/L		0.30	5.0
26	Ni	mg/L		0.07	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		0.26	5.0

continue

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TEST REPORT

Analysis No. : R22-2615
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 20/09/22
Received Date : 14/09/22
Analysis Date : 14-26/09/22
Sampling Date * : 13/09/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/Sep/02

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2209-WW0400	
				ออกจากระบบบำบัดน้ำเสียส่วนกลาง	
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	3.3×10^3	-
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable
31	Radioactive Substance ***				
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-
	- Gross Beta	Bq/L		0.481 ± 0.032	-
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705190 UTM 1448130

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ชงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

20/09/22



Mrs. Pornip Pethshee

Laboratory Manager

20/09/22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2690

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอสัตหีบ จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2209-WW0574 = black turbid/high black sediment/foul smell,

Flow Rate = 11,711 m³/Day

Report Date : 27/09/22

Received Date : 21/09/22

Analysis Date : 21-26/09/22

Sampling Date * : 20/09/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/Sep/03

Item	Parameter	Unit	Method	Result	Standard
				2209-WW0574	
				ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.7	45
2	pH *	-	Electrometric Method (SM 4500 B)	7.46	5.5-9.0
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	27.3	200
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	962	3,000
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	42	500

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705330 UTM 1448108

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

27.09.22



Mrs. Pomtip Pethshee

Laboratory Manager

27.09.22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2690
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1
Sample Conditions : 2209-WW0575 = yellow turbid/high black sediment,
Flow Rate = 5,692 m³/Day

Report Date : 27/09/22
Received Date : 21/09/22
Analysis Date : 21-26/09/22
Sampling Date * : 20/09/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/Sep/03

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2209-WW0575	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.9	40
2	pH *	-	Electrometric Method (SM 4500 B)	7.65	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	40	300
	Color (pH 7) *	ADMI		34	300
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	1.10	-
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	4.5	50
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,229	3,000
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	8	20
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.5	5
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.5	-
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	23.17	-
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	1.54	-
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	-
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	0.2
14	Phenol & Cresols *	mg/L	LLE, GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	360.7	-
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0053	0.25
20	Se *	mg/L		< 0.0005	0.02
21	Ba	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 F and part 3120 B	< 0.05	1.0
22	Cd	mg/L		< 0.02	0.03
23	Cr	mg/L		< 0.02	-
24	Cu	mg/L		< 0.05	2.0
25	Mn	mg/L		0.09	5.0
26	Ni	mg/L		0.08	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		0.29	5.0

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-2690
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 27/09/22
Received Date : 21/09/22
Analysis Date : 21-26/09/22
Sampling Date * : 20/09/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/Sep/03

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2209-WW0575	
				ออกจากระบบบำบัดน้ำเสียส่วนกลาง	
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	$> 1.6 \times 10^5$	-
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable
31	Radioactive Substance ***				
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-
	- Gross Beta	Bq/L		0.697 ± 0.041	-
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705188 UTM 1448129

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Ms. Wareerut Prachumdaeng
Chief of Laboratory
27, 09, 22



Mrs. Pornpip Pethshee
Laboratory Manager
27, 09, 22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2761

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอสัตหีบ จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2209-WW0749 = yellow turbid/high black sediment/covered with oil slick/foul smell,

Flow Rate = 12,594 m³/Day

Report Date : 11/10/22

Received Date : 28/09/22

Analysis Date : 28/09-03/10/22

Sampling Date * : 27/09/22

Sampling By * : TET

Type of Sample : Wastewater

Job No. : S650342/Sep/04

Item	Parameter	Unit	Method	Result	Standard
				2209-WW0749	
				ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.5	45
2	pH *	-	Electrometric Method (SM 4500 B)	7.11	5.5-9.0
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	26.0	200
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	728	3,000
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	32	500

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705332 UTM 1448104

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

11 / 10 / 22



Mrs. Porntip Pethshee

Laboratory Manager

11 / 10 / 22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-2761
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1
Sample Conditions : 2209-WW0750 = yellow turbid/slight black sediment/covered with oil slick,
Flow Rate = 5,670 m³/Day

Report Date : 11/10/22
Received Date : 28/09/22
Analysis Date : 28/09-07/10/22
Sampling Date * : 27/09/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/Sep/04

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2209-WW0750	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.3	40
2	pH *	-	Electrometric Method (SM 4500 B)	7.42	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	32	300
	Color (pH 7) *	ADMI		28	300
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.80	-
5	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	10.6	50
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	862	3,000
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	10	20
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.5	5
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.5	-
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	12.28	-
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	1.46	-
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.002	-
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.002	0.2
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	280.2	-
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0032	0.25
20	Se *	mg/L		< 0.0005	0.02
21	Ba	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 F and part 3120 B	< 0.05	1.0
22	Cd	mg/L		< 0.02	0.03
23	Cr *	mg/L	TM-11-01 Based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 E and part 3111 B	< 0.02	-
24	Cu	mg/L		< 0.03	2.0
25	Mn	mg/L		0.27	5.0
26	Ni	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 F and part 3120 B	< 0.20	1.0
27	Pb	mg/L		< 0.10	0.2
28	Zn	mg/L		0.27	5.0

continue

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TEST REPORT

Analysis No. : R22-2761
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 11/10/22
Received Date : 28/09/22
Analysis Date : 28/09-21/10/22
Sampling Date * : 27/09/22
Sampling By * : TET
Type of Sample : Wastewater
Job No. : S650342/Sep/04

Item	Parameter	Unit	Method ^(A)	Result	Standard
				2209-WW0750	
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง	
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	1.7×10^4	-
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable
31	Radioactive Substance ***				
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-
	- Gross Beta	Bq/L		0.563 ± 0.035	-
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705190 UTM 1448129

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 รงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิสักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

11 / 10 / 22



Mrs. Porntip Pethshee

Laboratory Manager

11 / 10 / 22

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TEST REPORT

Analysis No. : R22-2811

Received Date: 05/10/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 03/11/22

Analysis Date : 05-10/10/22

Job No. : S650342/Oct/01

Sampling Date * : 04/10/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2210-WW0048 = gray turbid/high black sediment/foul smell, Flow Rate = 12,985 m³/Day

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2210-WW0048		
				ก่อนเข้าระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.5	45	04/10/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.07	5.5-9.0	04/10/22
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	22.0	200	05/10/22
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,105	3,000	06/10/22
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	23	500	05-10/10/22

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705332 UTM 1448108

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

03/11/22



Approved by

Mrs. Porntip Pethshee

Laboratory Manager

03/11/22

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TEST REPORT

Analysis No. : R22-2811

Received Date: 05/10/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 03/11/22

Analysis Date : 04-21/10/22

Job No. : S650342/Oct/01

Sampling Date * : 04/10/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2210-WW0049 = yellow turbid/slight black sediment, Flow Rate = 6,286 m³/Day

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2210-WW0049		
				ออกจากระบบบำบัดน้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.5	40	04/10/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.05	5.5-9.0	04/10/22
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	31	300	06/10/22
	Color (pH 7) *	ADMI		31	300	06/10/22
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.70	-	06/10/22
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	5.2	50	05/10/22
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	931	3,000	06/10/22
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	6	20	05-10/10/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	5	07/10/22
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	-	07/10/22
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	10.01	-	05/10/22
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	3.32	-	07/10/22
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	-	05/10/22
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	0.2	05/10/22
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1	05-06/10/22
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1	07/10/22
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1	07/10/22
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	255.1	-	07/10/22
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	06/10/22
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0036	0.25	07/10/22
20	Se *	mg/L		< 0.0005	0.02	07/10/22
21	Ba	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 F and part 3120 B	< 0.05	1.0	06/10/22
22	Cd	mg/L		< 0.02	0.03	06/10/22
23	Cr	mg/L		0.02	-	06/10/22
24	Cu	mg/L		< 0.05	2.0	06/10/22
25	Mn	mg/L		0.21	5.0	06/10/22
26	Ni	mg/L		0.05	1.0	06/10/22
27	Pb	mg/L		< 0.04	0.2	06/10/22
28	Zn	mg/L		0.24	5.0	06/10/22

continue

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

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TEST REPORT

Analysis No. : R22-2811
Received Date: 05/10/22
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 03/11/22
Analysis Date : 04-21/10/22
Job No. : S650342/Oct/01
Sampling Date * : 04/10/22
Sampling By * : TET
Type of Sample : Wastewater

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2210-WW0049 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	2.4 x 10 ⁴	-	05-10/10/22
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable	05-07/10/22
31	Radioactive Substance ***					
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-	21/10/22
	- Gross Beta	Bq/L		0.541 ± 0.035	-	21/10/22
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-	05-07/10/22

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705377 UTM 1448207

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิทยาลัยกษัตริย์ วสุทศิศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

03/11/22



Approved by

Mrs. Porntip Pethshee

Laboratory Manager

03/11/22

..... END OF REPORT

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2919
Received Date: 12/10/22
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 03/11/22
Analysis Date : 11-17/10/22
Job No. : S650342/Oct/02
Sampling Date * : 11/10/22
Sampling By * : TET
Type of Sample : Wastewater

Sample Conditions : 2210-WW0365 = black turbid/high black sediment/foul smell, Flow Rate = 14,173 m³/Day

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2210-WW0365		
				ก่อนเข้ระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	29.5	45	11/10/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.33	5.5-9.0	11/10/22
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	35.6	200	17/10/22
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	750	3,000	17/10/22
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	24	500	12-17/10/22

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"
: ก่อนเข้ระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705330 UTM 1448108
Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017
Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
03/11/22



Approved by

Mrs. Pornpip Pethshee
Laboratory Manager
03/11/22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2919
Received Date: 12/10/22
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 03/11/22
Analysis Date : 11-21/10/22
Job No. : S650342/Oct/02
Sampling Date * : 11/10/22
Sampling By * : TET
Type of Sample : Wastewater

Sample Conditions : 2210-WW0366 = yellow turbid/high black sediment, Flow Rate = 7,820 m³/Day

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2210-WW0366 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	29.7	40	11/10/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.42	5.5-9.0	11/10/22
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	50	300	12/10/22
	Color (pH 7) *	ADMI		34	300	12/10/22
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.90	-	17/10/22
5	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	11.5	50	17/10/22
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,008	3,000	17/10/22
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	4	20	12-17/10/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	5	18/10/22
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-	18/10/22
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	6.94	-	17/10/22
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	3.12	-	14/10/22
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.003	-	17/10/22
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.003	0.2	17/10/22
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1	12-17/10/22
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1	18/10/22
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1	14/10/22
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	309.8	-	14/10/22
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	12/10/22
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0037	0.25	14/10/22
20	Se *	mg/L		< 0.0005	0.02	17/10/22
21	Ba	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 rd edition, 2017, part 3030 F and part 3120 B	< 0.05	1.0	19/10/22
22	Cd	mg/L		< 0.02	0.03	19/10/22
23	Cr	mg/L		0.02	-	19/10/22
24	Cu	mg/L		< 0.05	2.0	19/10/22
25	Mn	mg/L		0.31	5.0	19/10/22
26	Ni	mg/L		0.07	1.0	19/10/22
27	Pb	mg/L		< 0.04	0.2	19/10/22
28	Zn	mg/L		0.38	5.0	19/10/22

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-2919
Received Date: 12/10/22
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 03/11/22
Analysis Date : 11-21/10/22
Job No. : S650342/Oct/02
Sampling Date * : 11/10/22
Sampling By * : TET
Type of Sample : Wastewater

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2210-WW0366 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	2.2×10^4	-	12-17/10/22
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable	12-14/10/22
31	Radioactive Substance ***					
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-	21/10/22
	- Gross Beta	Bq/L		0.740 ± 0.043	-	21/10/22
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-	12-14/10/22

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"
*** Subcontractor "Not TISI Accredited"
N.D. = Not Detectable (Less than 0.10 µg/L)
: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705192 UTM 1448129
Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017
(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิศุทธิ์ศักดิ์
(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual
Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
03 / 11 / 22



Approved by

Mrs. Pornpip Pethshee
Laboratory Manager
03 / 11 / 22

..... END OF REPORT

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-2967

Received Date: 20/10/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 22/11/22

Analysis Date : 19-25/10/22

Job No. : S650342/Oct/03

Sampling Date * : 19/10/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2210-WW0544 = black turbid/high black sediment/covered with oil slick/foul smell, Flow Rate = 10,578 m³/Day

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2210-WW0544		
				ก่อนเข้าระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.0	45	19/10/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.03	5.5-9.0	19/10/22
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	36.2	200	21/10/22
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	990	3,000	25/10/22
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	45	500	20-25/10/22

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705331 UTM 1448105

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

22/11/22



Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

22/11/22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-2967

Received Date: 20/10/22

Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2210-WW0545 = light yellow/high black sediment, Flow Rate = 2,385 m³/Day

Report Date : 22/11/22

Analysis Date : 19/10-01/11/22

Job No. : S650342/Oct/03

Sampling Date * : 19/10/22

Sampling By * : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2210-WW0545 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	29.2	40	19/10/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.12	5.5-9.0	19/10/22
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	40	300	21/10/22
	Color (pH 7) *	ADMI		33	300	21/10/22
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.80	-	20/10/22
5	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	10.4	50	21/10/22
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	925	3,000	25/10/22
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	7	20	20-25/10/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	5	20/10/22
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	-	20/10/22
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	17.25	-	25/10/22
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	1.91	-	20/10/22
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.001	-	21/10/22
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.001	0.2	21/10/22
14	Phenol & Cresols *	mg/L	LLE, GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1	21-26/10/22
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1	21/10/22
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1	21/10/22
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	257.8	-	25/10/22
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	26/10/22
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0040	0.25	21/10/22
20	Se *	mg/L		< 0.0005	0.02	25/10/22
21	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	1.0	31/10/22
22	Cd	mg/L	TM-11-01 Based on SM Part 3030E and 3111B	< 0.03	0.03	31/10/22
23	Cr *	mg/L	Digestion, Direct Air-Acetylene Flame Method (SM 3030E and 3111B)	0.03	-	26/10/22
24	Cu	mg/L	TM-11-01 Based on SM Part 3030E and 3111B	< 0.03	2.0	27/10/22
25	Mn	mg/L	TM-11-01 Based on SM Part 3030E and 3111B	0.24	5.0	27/10/22
26	Ni	mg/L	TM-11-01 Based on SM Part 3030E and 3111B	< 0.20	1.0	28/10/22
27	Pb *	mg/L	Digestion, Direct Air-Acetylene Flame Method (SM 3030E and 3111B)	< 0.10	0.2	26/10/22
28	Zn	mg/L	TM-11-01 Based on SM Part 3030E and 3111B	0.31	5.0	01/11/22

continue

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TEST REPORT

Analysis No. : R22-2967

Received Date: 20/10/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 22/11/22

Analysis Date : 19/10-01/11/22

Job No. : S650342/Oct/03

Sampling Date * : 19/10/22

Sampling By * : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2210-WW0545 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	3.5×10^4	-	20-25/10/22
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable	21-25/10/22
31	Radioactive Substance ***					
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-	31/10/22
	- Gross Beta	Bq/L		0.522 ± 0.034	-	31/10/22
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-	21-25/10/22

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705189 UTM 1448129

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

22/11/22



Approved by

Mrs. Pomtip Pethshee

Laboratory Manager

22/11/22

..... END OF REPORT

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

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TEST REPORT

Analysis No. : R22-3034

Received Date: 26/10/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 07/11/22

Analysis Date : 25-31/10/22

Job No. : S650342/Oct/04

Sampling Date * : 25/10/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2210-WW0649 = gray turbid/high black sediment/foul smell, Flow Rate = 10,987 m³/Day

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2210-WW0649		
				ก่อนเข้าระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.3	45	25/10/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.47	5.5-9.0	25/10/22
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	34.4	200	31/10/22
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	796	3,000	27/10/22
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	37	500	26-31/10/22

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705329 UTM 1448107

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

07/11/22



Approved by

Mrs. Pomtip Pethshee

Laboratory Manager

07/11/22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-3034

Received Date: 26/10/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 07/11/22

Analysis Date : 25/10-02/11/22

Job No. : S650342/Oct/04

Sampling Date * : 25/10/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2210-WW0650 = yellow turbid/moderate white sediment, Flow Rate = 2,958 m³/Day

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2210-WW0650		
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.1	40	25/10/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.50	5.5-9.0	25/10/22
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	22	300	26/10/22
	Color (pH 7) *	ADMI		17	300	26/10/22
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.80	-	27/10/22
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	5.2	50	31/10/22
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	997	3,000	27/10/22
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	6	20	26-31/10/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	5	27/10/22
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-	27/10/22
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	8.66	-	26/10/22
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	1.37	-	27/10/22
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.002	-	27/10/22
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.002	0.2	27/10/22
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1	27/10-02/11/22
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1	27/10/22
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1	31/10/22
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	279.3	-	31/10/22
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	26/10/22
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0034	0.25	31/10/22
20	Se *	mg/L		< 0.0005	0.02	31/10/22
21	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	1.0	31/10/22
22	Cd	mg/L	TM-11-01 Based on SM Part 3030E and 3111B	< 0.03	0.03	31/10/22
23	Cr *	mg/L	Digestion, Direct Air-Acetylene Flame Method (SM 3030E and 3111B)	< 0.02	-	26/10/22
24	Cu	mg/L	TM-11-01 Based on SM Part 3030E and 3111B	< 0.03	2.0	27/10/22
25	Mn	mg/L	TM-11-01 Based on SM Part 3030E and 3111B	0.22	5.0	27/10/22
26	Ni	mg/L	TM-11-01 Based on SM Part 3030E and 3111B	< 0.20	1.0	28/10/22
27	Pb *	mg/L	Digestion, Direct Air-Acetylene Flame Method (SM 3030E and 3111B)	< 0.10	0.2	26/10/22
28	Zn	mg/L	TM-11-01 Based on SM Part 3030E and 3111B	0.26	5.0	28/10/22

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-3034
Received Date: 26/10/22
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 07/11/22
Analysis Date : 25/10-02/11/22
Job No. : S650342/Oct/04
Sampling Date * : 25/10/22
Sampling By * : TET
Type of Sample : Wastewater

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2210-WW0650 ออกจากระบบบำบัดน้ำเสียส่วนกลาง		
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	1.6×10^5	-	26-28/10/22
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable	26/10-02/11/22
31	Radioactive Substance ***					
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-	31/10/22
	- Gross Beta	Bq/L		0.557 ± 0.035	-	31/10/22
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-	27/10-02/11/22

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"
*** Subcontractor "Not TISI Accredited"
N.D. = Not Detectable (Less than 0.10 µg/L)
: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705189 UTM 1448129
Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017
(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ชงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิศุทธิ์ศักดิ์
(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual
Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
07/11/22



Approved by

Mrs. Porntip Pethshee
Laboratory Manager
07/11/22

..... END OF REPORT

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-3102

Received Date: 02/11/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 22/11/22

Analysis Date : 01-07/11/22

Job No. : S650342/Nov/01

Sampling Date * : 01/11/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2211-WW0037 = yellow turbid/high black sediment/covered with oil slick/foul smell, Flow Rate = 9,501 m³/Day

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2211-WW0037		
				ก่อนเข้าระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.5	45	01/11/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.46	5.5-9.0	01/11/22
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	28.1	200	03/11/22
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	736	3,000	04/11/22
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	49	500	02-07/11/22

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705332 UTM 1448108

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

22/11/22



Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

22/11/22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-3102

Received Date: 02/11/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Sample Conditions : 2211-WW0038 = light yellow/high black sediment, Flow Rate = 5,458 m³/Day

Report Date : 22/11/22

Analysis Date : 01-10/11/22

Job No. : S650342/Nov/01

Sampling Date * : 01/11/22

Sampling By * : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2211-WW0038 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.1	40	01/11/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.55	5.5-9.0	01/11/22
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	45	300	02/11/22
	Color (pH 7) *	ADMI		29	300	02/11/22
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.70	-	04/11/22
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	4.9	50	03/11/22
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	786	3,000	04/11/22
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	5	20	02-07/11/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	5	03/11/22
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-	03/11/22
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	10.84	-	07/11/22
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	3.30	-	02/11/22
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	-	04/11/22
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	0.2	04/11/22
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1	02-04/11/22
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1	03/11/22
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1	07/11/22
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	220.0	-	04/11/22
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	02/11/22
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0047	0.25	03/11/22
20	Se *	mg/L		< 0.0005	0.02	03/11/22
21	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.07	1.0	04/11/22
22	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.03	04/11/22
23	Cr	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	-	04/11/22
24	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	2.0	04/11/22
25	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.18	5.0	04/11/22
26	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.05	1.0	04/11/22
27	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	0.2	04/11/22
28	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.25	5.0	04/11/22

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-3102

Received Date: 02/11/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอสัตหีบ จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 22/11/22

Analysis Date : 01-10/11/22

Job No. : S650342/Nov/01

Sampling Date * : 01/11/22

Sampling By * : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2211-WW0038 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	2.3×10^3	-	02-07/11/22
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable	03-07/11/22
31	Radioactive Substance ***					
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-	10/11/22
	- Gross Beta	Bq/L		0.614 ± 0.038	-	10/11/22
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-	03-07/11/22

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705192 UTM 1448129

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ของชัย พรหมสวัสดิ์, วิทยาลัยเทคโนโลยี สุทธิศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

22/11/22



Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

22/11/22

..... END OF REPORT

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

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TEST REPORT

Analysis No. : R22-3161

Received Date: 09/11/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 15/11/22

Analysis Date : 08-14/11/22

Job No. : S650342/Nov/02

Sampling Date * : 08/11/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2211-WW0260 = yellow turbid/high black sediment/covered with oil slick/foul smell, Flow Rate = 9,634 m³/Day

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2211-WW0260		
				ก่อนเข้าระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.0	45	08/11/22
2	pH *	-	Electrometric Method (SM 4500 B)	6.77	5.5-9.0	08/11/22
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	29.6	200	14/11/22
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	970	3,000	10/11/22
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	41	500	09-14/11/22

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705330 UTM 1448108

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

15/11/22



Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

15/11/22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-3161

Received Date: 09/11/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 15/11/22

Analysis Date : 08-14/11/22

Job No. : S650342/Nov/02

Sampling Date * : 08/11/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2211-WW0261 = light yellow/slight black sediment , Flow Rate = 2,684 m³/Day

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2211-WW0261 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.1	40	08/11/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.10	5.5-9.0	08/11/22
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	23	300	10/11/22
	Color (pH 7) *	ADMI		23	300	10/11/22
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.70	-	09/11/22
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	4.3	50	14/11/22
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	915	3,000	10/11/22
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	3	20	09-14/11/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	5	11/11/22
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-	11/11/22
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	13.02	-	11/11/22
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	1.82	-	09/11/22
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	-	11/11/22
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	0.2	11/11/22
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1	10-14/11/22
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1	11/11/22
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1	11/11/22
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	255.3	-	09/11/22
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	11/11/22
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0030	0.25	09/11/22
20	Se *	mg/L		< 0.0005	0.02	11/11/22
21	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	1.0	10/11/22
22	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.03	10/11/22
23	Cr	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	-	10/11/22
24	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	2.0	10/11/22
25	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.20	5.0	10/11/22
26	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.04	1.0	10/11/22
27	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	0.2	10/11/22
28	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.21	5.0	10/11/22

continue

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

● DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-3161
Received Date: 09/11/22
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 15/11/22
Analysis Date : 08-14/11/22
Job No. : S650342/Nov/02
Sampling Date * : 08/11/22
Sampling By * : TET
Type of Sample : Wastewater

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2211-WW0261 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	2.4×10^3	-	09-14/11/22
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable	09-11/11/22
31	Radioactive Substance ***					
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-	14/11/22
	- Gross Beta	Bq/L		0.501 ± 0.033	-	14/11/22
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-	10-11/11/22

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705192 UTM 1448129

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ชงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory

15/11/22



Approved by

Mrs. Porntip Pethshee
Laboratory Manager

15/11/22

..... END OF REPORT

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-3259
Received Date: 16/11/22
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1
Report Date : 22/11/22
Analysis Date : 15-21/11/22
Job No. : S650342/Nov/03
Sampling Date * : 15/11/22
Sampling By * : TET
Type of Sample : Wastewater
Sample Conditions : 2211-WW0559 = black turbid/high black sediment/covered with oil slick/smell, Flow Rate = 10,673 m³/Day

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2211-WW0559		
				ก่อนเข้าระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.3	45	15/11/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.32	5.5-9.0	15/11/22
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	30.7	200	21/11/22
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	967	3,000	17/11/22
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	34	500	16-21/11/22

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"
: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705330 UTM 1448108
Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017
Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
22/11/22



Approved by

Mrs. Porntip Pethshee
Laboratory Manager
22/11/22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-3259

Received Date: 16/11/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 22/11/22

Analysis Date : 15-21/11/22

Job No. : S650342/Nov/03

Sampling Date * : 15/11/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2211-WW0560 = yellow turbid/high black sediment, Flow Rate = 6,225 m³/Day

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2211-WW0560		
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.6	40	15/11/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.40	5.5-9.0	15/11/22
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	28	300	17/11/22
	Color (pH 7) *	ADMI		27	300	17/11/22
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.70	-	17/11/22
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	3.2	50	21/11/22
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,027	3,000	17/11/22
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	6	20	16-21/11/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	5	21/11/22
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	-	21/11/22
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	11.54	-	16/11/22
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	1.56	-	18/11/22
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	-	18/11/22
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	< 0.001	0.2	18/11/22
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1	16-18/11/22
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1	18/11/22
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1	18/11/22
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	251.4	-	17/11/22
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	18/11/22
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0030	0.25	17/11/22
20	Se *	mg/L		< 0.0005	0.02	17/11/22
21	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	1.0	18/11/22
22	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.03	18/11/22
23	Cr	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	-	18/11/22
24	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	2.0	18/11/22
25	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.20	5.0	18/11/22
26	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.06	1.0	18/11/22
27	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	0.2	18/11/22
28	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.19	5.0	18/11/22

continue

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

● DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-3259

Received Date: 16/11/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 22/11/22

Analysis Date : 15-25/11/22

Job No. : S650342/Nov/03

Sampling Date * : 15/11/22

Sampling By * : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2211-WW0560 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	7.0×10^3	-	16-21/11/22
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable	16-17/11/22
31	Radioactive Substance ***					
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-	25/11/22
	- Gross Beta	Bq/L		0.524 ± 0.034	-	25/11/22
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-	16-17/11/22

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705192 UTM 1448129

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

22/11/22



Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

22/11/22

..... END OF REPORT

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

● DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-3338

Received Date: 23/11/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 30/11/22

Analysis Date : 22-28/11/22

Job No. : S650342/Nov/04

Sampling Date * : 22/11/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2211-WW0693 = black turbid/high black sediment/covered with oil slick/smell, Flow Rate = 9,458 m³/Day

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2211-WW0693		
				ก่อนเข้าระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.6	45	22/11/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.56	5.5-9.0	22/11/22
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	24.3	200	28/11/22
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	928	3,000	24/11/22
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	36	500	23-28/11/22

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705330 UTM 1448108

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

30/11/22



Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

30/11/22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-3338

Received Date: 23/11/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 30/11/22

Analysis Date : 22-28/11/22

Job No. : S650342/Nov/04

Sampling Date * : 22/11/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2211-WW0694 = yellow turbid/slight black sediment/covered with oil slick/smell , Flow Rate = 5,015 m³/Day

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2211-WW0694		
				ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.1	40	22/11/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.53	5.5-9.0	22/11/22
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	22	300	25/11/22
	Color (pH 7) *	ADMI		16	300	25/11/22
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.70	-	25/11/22
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	3.1	50	28/11/22
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	874	3,000	24/11/22
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	4	20	23-28/11/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	5	25/11/22
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-	25/11/22
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	12.53	-	23/11/22
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	1.98	-	28/11/22
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.001	-	25/11/22
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.002	0.2	25/11/22
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1	23-25/11/22
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1	24/11/22
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1	25/11/22
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	239.1	-	24/11/22
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	24/11/22
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0026	0.25	23/11/22
20	Se *	mg/L		< 0.0005	0.02	23/11/22
21	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	1.0	28/11/22
22	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.03	28/11/22
23	Cr	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	-	28/11/22
24	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	2.0	28/11/22
25	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.20	5.0	28/11/22
26	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.05	1.0	28/11/22
27	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	0.2	28/11/22
28	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.17	5.0	28/11/22

continue

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TEST REPORT

Analysis No. : R22-3338

Received Date: 23/11/22

Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 30/11/22

Analysis Date : 22-28/11/22

Job No. : S650342/Nov/04

Sampling Date * : 22/11/22

Sampling By * : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2211-WW0694 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	7.9×10^2	-	22-26/11/22
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable	23-25/11/22
31	Radioactive Substance ***					
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-	25/11/22
	- Gross Beta	Bq/L		0.534 ± 0.034	-	25/11/22
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-	23-28/11/22

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705192 UTM 1448129

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิศุทธิ์ศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

30/11/22



Approved by

Mrs. Pomtip Pethshee

Laboratory Manager

30/11/22

..... END OF REPORT

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

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TEST REPORT

Analysis No. : R22-3397
Received Date: 30/11/22
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1
Report Date : 28/12/22
Analysis Date : 29/11-06/12/22
Job No. : S650342/Nov/05
Sampling Date * : 29/11/22
Sampling By * : TET
Type of Sample : Wastewater
Sample Conditions : 2211-WW0809 = brown turbid/moderate black sediment/covered with oil slick/smell, Flow Rate = 10,365 m³/Day

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2211-WW0809		
				ก่อนเข้าระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.7	45	29/11/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.33	5.5-9.0	29/11/22
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	25.5	200	30/11/22
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,028	3,000	30/11/22
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	50	500	01-06/12/22

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"
: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705330 UTM 1448108
Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017
Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
28/12/22



Approved by

Mrs. Pornpip Pethshee
Laboratory Manager
28/12/22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-3397

Received Date: 30/11/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอสัตหีบ จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 28/12/22

Analysis Date : 29/11-06/12/22

Job No. : S650342/Nov/05

Sampling Date * : 29/11/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2211-WW0810 = yellow turbid/moderate black sediment/covered with oil slick, Flow Rate = 4,285 m³/Day

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2211-WW0810		
				ออกจากระบบบำบัดน้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.3	40	29/11/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.65	5.5-9.0	29/11/22
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	28	300	30/11/22
	Color (pH 7) *	ADMI		22	300	30/11/22
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.80	-	01/12/22
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	4.2	50	30/11/22
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,012	3,000	30/11/22
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	5	20	01-06/12/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	5	01/12/22
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-	01/12/22
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	14.64	-	30/11/22
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	2.57	-	02/12/22
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.001	-	02/12/22
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.001	0.2	02/12/22
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1	30/11-02/12/22
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1	01/12/22
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1	30/11/22
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	267.1	-	06/12/22
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	06/12/22
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0035	0.25	02/12/22
20	Se *	mg/L		< 0.0005	0.02	02/12/22
21	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	1.0	06/12/22
22	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.03	06/12/22
23	Cr	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	-	06/12/22
24	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	2.0	06/12/22
25	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.19	5.0	06/12/22
26	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.05	1.0	06/12/22
27	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	0.2	06/12/22
28	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.24	5.0	06/12/22

continue

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TEST REPORT

Analysis No. : R22-3397

Received Date: 30/11/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอสัตหีบ จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 28/12/22

Analysis Date : 29/11-06/12/22

Job No. : S650342/Nov/05

Sampling Date * : 29/11/22

Sampling By * : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2211-WW0810 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	1.3×10^2	-	30/11-05/12/22
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable	30/11-01/12/22
31	Radioactive Substance ***					
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-	06/12/22
	- Gross Beta	Bq/L		0.529 ± 0.034	-	06/12/22
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-	30/11-01/12/22

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705192 UTM 1448129

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 รงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory



Approved by

Mrs. Pornpip Pethshee
Laboratory Manager

..... END OF REPORT

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

● DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-3465

Received Date: 07/12/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอสัตหีบ จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 04/01/23

Analysis Date : 06-12/12/22

Job No. : S650342/Dec/01

Sampling Date * : 06/12/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2212-WW0084 = yellow turbid/high black sediment/covered with oil slick/smell, Flow Rate = 8,459 m³/Day

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2212-WW0084		
				ก่อนเข้าระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.6	45	06/12/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.66	5.5-9.0	06/12/22
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	33.8	200	09/12/22
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,074	3,000	07/12/22
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	22	500	07-12/12/22

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705332 UTM 1448108

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

04/01/23



Approved by

Mrs. Porntip Pethshee

Laboratory Manager

04/01/23

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-3465
Received Date: 07/12/22
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 04/01/23
Analysis Date : 06-12/12/22
Job No. : S650342/Dec/01
Sampling Date * : 06/12/22
Sampling By * : TET
Type of Sample : Wastewater

Sample Conditions : 2212-WW0085 = yellow turbid/slight white sediment, Flow Rate = 2,887 m³/Day

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2212-WW0085 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.7	40	06/12/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.70	5.5-9.0	06/12/22
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	76	300	07/12/22
	Color (pH 7) *	ADMI		64	300	07/12/22
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	2.20	-	07/12/22
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	< 2.5	50	09/12/22
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	2,960	3,000	07/12/22
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	4	20	07-12/12/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	5	09/12/22
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	-	09/12/22
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	27.54	-	08/12/22
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	0.45	-	08/12/22
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.003	-	08/12/22
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.003	0.2	08/12/22
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1	07-08/12/22
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1	08/12/22
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1	09/12/22
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	811.0	-	08/12/22
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	12/12/22
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0064	0.25	09/12/22
20	Se *	mg/L		< 0.0005	0.02	08/12/22
21	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.05	1.0	08/12/22
22	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.03	08/12/22
23	Cr	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	-	08/12/22
24	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	2.0	08/12/22
25	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.49	5.0	08/12/22
26	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.12	1.0	08/12/22
27	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	0.2	08/12/22
28	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.36	5.0	08/12/22

continue

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-3465

Received Date: 07/12/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 04/01/23

Analysis Date : 06-12/12/22

Job No. : S650342/Dec/01

Sampling Date * : 06/12/22

Sampling By * : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2212-WW0085 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	23	-	07-12/12/22
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable	07-09/12/22
31	Radioactive Substance ***					
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0,	< 0.018	-	09/12/22
	- Gross Beta	Bq/L	Section 1 Gross Alpha and Gross Beta Radioactivity	1.304 ± 0.069	-	09/12/22
			In Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water"			
			EPA-600/4/80-032 (1980).			
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-	07-09/12/22

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705192 UTM 1448129

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ชงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิศุทธิ์ศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

04/01/23



Approved by

Mrs. Pomtip Pethshee

Laboratory Manager

04/01/23

..... END OF REPORT

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-3595
Received Date: 14/12/22
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอสัตหีบ จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 28/12/22
Analysis Date : 13-19/12/22
Job No. : S650342/Dec/02
Sampling Date * : 13/12/22
Sampling By * : TET
Type of Sample : Wastewater

Sample Conditions : 2212-WW0443 = black turbid/high black sediment/smell, Flow Rate = 8,925 m³/Day

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2212-WW0443		
				ก่อนเข้าระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	29.7	45	13/12/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.54	5.5-9.0	13/12/22
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	17.6	200	19/12/22
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	854	3,000	16/12/22
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	29	500	14-19/12/22

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"
: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705330 UTM 1448108
Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017
Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
28, 12, 22



Approved by

Mrs. Porntip Pethshee
Laboratory Manager
28, 12, 22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-3595

Received Date: 14/12/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Sample Conditions : 2212-WW0444 = yellow turbid/high black sediment, Flow Rate = 4,459 m³/Day

Report Date : 28/12/22

Analysis Date : 13-20/12/22

Job No. : S650342/Dec/02

Sampling Date * : 13/12/22

Sampling By * : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2212-WW0444 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	29.2	40	13/12/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.65	5.5-9.0	13/12/22
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	38	300	15/12/22
	Color (pH 7) *	ADMI		28	300	15/12/22
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.70	-	16/12/22
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	4.4	50	19/12/22
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	991	3,000	16/12/22
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	7	20	14-19/12/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	5	16/12/22
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	-	16/12/22
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	13.67	-	20/12/22
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	2.25	-	15/12/22
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.001	-	15/12/22
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.002	0.2	15/12/22
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1	14-16/12/22
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1	16/12/22
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1	16/12/22
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	262.7	-	16/12/22
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	16/12/22
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0030	0.25	15/12/22
20	Se *	mg/L		< 0.0005	0.02	15/12/22
21	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	1.0	16/12/22
22	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.03	16/12/22
23	Cr	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	-	16/12/22
24	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	2.0	16/12/22
25	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.20	5.0	16/12/22
26	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.05	1.0	16/12/22
27	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	0.2	16/12/22
28	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.19	5.0	16/12/22

continue

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

● DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-3595

Received Date: 14/12/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 28/12/22

Analysis Date : 13-20/12/22

Job No. : S650342/Dec/02

Sampling Date * : 13/12/22

Sampling By * : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2212-WW0444 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	$> 1.6 \times 10^5$	-	15-19/12/22
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable	14-15/12/22
31	Radioactive Substance ***					
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-	20/12/22
	- Gross Beta	Bq/L		0.601 ± 0.037	-	20/12/22
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-	14-15/12/22

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705192 UTM 1448129

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ของ พ.ร.บ. ควบคุมมลพิษ, วิเคราะห์ด้วยวิธีทางเคมี

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
28/12/22



Approved by

Mrs. Pornpip Pethshee
Laboratory Manager
28/12/22

..... END OF REPORT

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-3684

Received Date: 21/12/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 27/12/22

Analysis Date : 20-26/12/22

Job No. : S650342/Dec/03

Sampling Date * : 20/12/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2212-WW0599 = black turbid/high black sediment/smell, Flow Rate = 8,876 m³/Day

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2212-WW0599		
				ก่อนเข้าระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	28.7	45	20/12/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.60	5.5-9.0	20/12/22
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	29.4	200	23/12/22
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	888	3,000	22/12/22
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	45	500	21-26/12/22

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705330 UTM 1448108

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

27.12.22



Approved by

Mrs. Porntip Pethshee

Laboratory Manager

27.12.22

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-3684

Received Date: 21/12/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 27/12/22

Analysis Date : 20-26/12/22

Job No. : S650342/Dec/03

Sampling Date * : 20/12/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2212-WW0600 = yellow turbid/high black sediment, Flow Rate = 4,384 m³/Day

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2212-WW0600		
				ออกจากระบบบำบัดน้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	27.6	40	20/12/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.81	5.5-9.0	20/12/22
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	37	300	22/12/22
	Color (pH 7) *	ADMI		29	300	22/12/22
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	1.20	-	22/12/22
5	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	3.4	50	23/12/22
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	1,567	3,000	22/12/22
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	7	20	21-26/12/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	5	23/12/22
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	-	23/12/22
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	21.26	-	26/12/22
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	3.85	-	23/12/22
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.003	-	21/12/22
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.003	0.2	21/12/22
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1	21-23/12/22
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1	23/12/22
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1	21/12/22
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	405.8	-	23/12/22
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	21/12/22
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0043	0.25	23/12/22
20	Se *	mg/L		< 0.0005	0.02	23/12/22
21	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	1.0	22/12/22
22	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.03	22/12/22
23	Cr	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	-	22/12/22
24	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	2.0	22/12/22
25	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.31	5.0	22/12/22
26	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.09	1.0	22/12/22
27	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	0.2	22/12/22
28	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.25	5.0	22/12/22

continue

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TEST REPORT

Analysis No. : R22-3684
Received Date: 21/12/22
Customer : Technical Division of Thai Environmental Technic Limited
For นิคมอุตสาหกรรมแหลมฉบัง
Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230
Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 27/12/22
Analysis Date : 20-26/12/22
Job No. : S650342/Dec/03
Sampling Date * : 20/12/22
Sampling By * : TET
Type of Sample : Wastewater

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2212-WW0600 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	5.4 x 10 ⁴	-	21-25/12/22
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable	21-22/12/22
31	Radioactive Substance ***					
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-	23/12/22
	- Gross Beta	Bq/L		0.865 ± 0.048	-	23/12/22
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-	21-22/12/22

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705192 UTM 1448129

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

27.12.22



Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

27.12.22

..... END OF REPORT

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R22-3767

Received Date: 28/12/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 09/01/23

Analysis Date : 27/12/22-04/01/23

Job No. : S650342/Dec/04

Sampling Date * : 27/12/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2212-WW0728 = black turbid/high black sediment/smell, Flow Rate = 5,908 m³/Day

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2212-WW0728		
				ก่อนเข้าระบบบำบัด น้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	28.8	45	27/12/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.40	5.5-9.0	27/12/22
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	44.3	200	04/01/23
4	DS *	mg/L	Dried at 180 °C (SM 2540 C)	950	3,000	03/01/23
5	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	26	500	29/12/22- 03/01/23

Remarks : * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

: ก่อนเข้าระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705330 UTM 1448108

Method : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

Standard : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

09, 01, 23



Approved by

Mrs. Pomtip Pethshee

Laboratory Manager

09, 01, 23

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
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TEST REPORT

Analysis No. : R22-3767

Received Date: 28/12/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอศรีราชา จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5 Fax. (038) 490 940-1

Report Date : 09/01/23

Analysis Date : 27/12/22-09/01/23

Job No. : S650342/Dec/04

Sampling Date * : 27/12/22

Sampling By * : TET

Type of Sample : Wastewater

Sample Conditions : 2212-WW0729 = yellow turbid/high yellow sediment, Flow Rate = 4,317 m³/Day

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2212-WW0729		
				ออกจากระบบบำบัดน้ำเสียส่วนกลาง		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	27.7	40	27/12/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.44	5.5-9.0	27/12/22
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	34	300	28/12/22
	Color (pH 7) *	ADMI		32	300	28/12/22
4	Salinity *	ppt	Electrical Conductivity (SM 2520 B)	0.70	-	04/01/23
5	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	10.2	50	04/01/23
6	DS *	mg/L	Dried at 180 °C (SM 2540 C)	874	3,000	03/01/23
7	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	4	20	29/12/22-03/01/23
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	5	04/01/23
9	Tar *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	-	04/01/23
10	NH ₃ *	mg/L	Distillation/Titrimetric Method (SM 4500-NH ₃ C)	9.80	-	04/01/23
11	Organic Phosphorus *	mg/L	Ascorbic Acid (Colorimetric) (SM 4500-P E)	1.52	-	04/01/23
12	CN ⁻ *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.002	-	28/12/22
13	HCN *	mg/L	Distillation, Colorimetric Method (SM 4500-CN ⁻ B/E)	0.002	0.2	28/12/22
14	Phenol & Cresols *	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) ^(C)	< 0.001	1	04-06/01/23
15	Sulphide as H ₂ S *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S ²⁻ D)	< 0.01	1	28/12/22
16	Formaldehyde *	mg/L	Distillation, Colorimetric Method ^(B)	< 0.01	1	28/12/22
17	Cl ⁻ *	mg/L	Argentometric Method (SM 4500-Cl ⁻ B)	228.4	-	03/01/23
18	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	09/01/23
19	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114 C)	0.0037	0.25	04/01/23
20	Se *	mg/L		< 0.0005	0.02	05/01/23
21	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	1.0	03/01/23
22	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.03	03/01/23
23	Cr	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.03	-	03/01/23
24	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	2.0	03/01/23
25	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.22	5.0	03/01/23
26	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.07	1.0	03/01/23
27	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	0.2	03/01/23
28	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.28	5.0	03/01/23

continue

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TEST REPORT

Analysis No. : R22-3767

Received Date: 28/12/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมแหลมฉบัง

Address : 49/19 หมู่ 5 ตำบลทุ่งสุขลา อำเภอสัตหีบ จังหวัดชลบุรี 20230

Contact : Tel. (038) 490 942-5

Fax. (038) 490 940-1

Report Date : 09/01/23

Analysis Date : 27/12/22-09/01/23

Job No. : S650342/Dec/04

Sampling Date * : 27/12/22

Sampling By * : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method ^(A)	Result	Standard	Analysis Date
				2212-WW0729 ออกจากระบบบำบัด น้ำเสียส่วนกลาง		
29	Coliform Bacteria *	MPN/100 mL	Multiple-Tube Fermentation Technique (SM 9221 B&C)	4.9×10^3	-	03-06/01/23
30	Insecticide *	µg/L	LLE, GC/ECD (SM 6630 B)	N.D.	Non-detectable	04/01/23
31	Radioactive Substance ***					
	- Gross Alpha	Bq/L	In house method based on EPA method 900.0, Section 1 Gross Alpha and Gross Beta Radioactivity in Drinking Water Method 900.0. In "Prescribed procedures for measurement of radioactivity in drinking water" EPA-600/4/80-032 (1980).	< 0.018	-	09/01/23
	- Gross Beta	Bq/L		0.577 ± 0.036	-	09/01/23
32	PCB *	µg/L	LLE, GC/ECD (SM 6431B and 6630B)	< 0.01	-	04/01/23

Remarks * "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"

*** Subcontractor "Not TISI Accredited"

N.D. = Not Detectable (Less than 0.10 µg/L)

: ออกจากระบบบำบัดน้ำเสียส่วนกลาง = 47P 0705192 UTM 1448129

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition, 2017

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 รงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิศักดิ์

(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD : SW: 846 Manual

Standard : Notification of Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory
09/01/23



Approved by

Mrs. Pornpip Pethshee

Laboratory Manager
09/01/23

..... END OF REPORT

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

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