



## TEST REPORT

**Analysis No.** : R22-1897

**Customer** : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact** : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Sample Conditions** : 2207-WW0129 = yellow turbid/high black sediment/foul smell,

Flow Rate = 1,664 m<sup>3</sup>/Day, Odor = smell, 2206-WW0131 = black turbid/high black sediment/foul smell,

Flow Rate = 2,836 m<sup>3</sup>/Day, Odor = smell

**Report Date** : 13/07/22

**Received Date** : 07/07/22

**Analysis Date** : 07-12/07/22

**Sampling Date \*** : 06/07/22

**Sampling By \*** : TET

**Type of Sample** : Wastewater

**Job No.** : S650347/July

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard
				2207-WW0129	2207-WW0131	
				W3	W5	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	32.1	32.0	45
2	pH *	-	Electrometric Method (SM 4500 B)	7.83	7.80	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate	145	100	600
	Color (pH 7) *	ADMI	Spectrophotometric Method (SM 2120 F)	129	86	600
4	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	32.1	131.2	200
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	506	1,244	3,000
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	51	130	500
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	182	600	750
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	4.5	2.7	10
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	39.50	22.17	100
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	22.45	14.21	-
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	12.85	21.77	-
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	0.498	0.2
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	0.244	1
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	18.67	2.94	1
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	0.08	1
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	< 0.01	1
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	< 0.02	0.09	0.75
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	< 0.02	0.25
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.005
20	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0015	0.0031	0.25
21	Se *	mg/L		< 0.0005	< 0.0005	0.02
22	Ba	mg/L		0.06	0.08	1.0
23	Cd	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> edition, 2017, part 3030 F and part 3120 B	< 0.02	< 0.02	0.03
24	Cu	mg/L		0.05	2.09	2.0
25	Mn	mg/L		0.22	0.11	5.0
26	Ni	mg/L		< 0.02	0.06	1.0
27	Pb	mg/L		< 0.04	< 0.04	0.2
28	Zn	mg/L		0.06	1.78	5.0

continue

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**Analysis No.** : R22-1897

**Customer** : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact** : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

**Report Date** : 13/07/22

**Received Date** : 07/07/22

**Analysis Date** : 07-20/07/22

**Sampling Date \*** : 06/07/22

**Sampling By \*** : TET

**Type of Sample** : Wastewater

**Job No.** : S650347/July

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard
				2207-WW0129	2207-WW0131	
				W3	W5	
29	Organochlorine *			Not Detected	Not Detected	
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	Not Detected	can not found
	- Beta-BHC	µg/L		Not Detected	Not Detected	can not found
	- Gamma-BHC (Lindane)	µg/L		Not Detected	Not Detected	can not found
	- Heptachlor	µg/L		Not Detected	Not Detected	can not found
	- Aldrin	µg/L		Not Detected	Not Detected	can not found
	- Dicofol	µg/L		Not Detected	Not Detected	can not found
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	Not Detected	can not found
	- Heptachlor-endo-epoxide (tran-isomer A)	µg/L		Not Detected	Not Detected	can not found
	- Gamma-Chlordane	µg/L		Not Detected	Not Detected	can not found
	- o,p'-DDE	µg/L		Not Detected	Not Detected	can not found
	- Alpha Endosulfan	µg/L		Not Detected	Not Detected	can not found
	- Alpha-Chlordane	µg/L		Not Detected	Not Detected	can not found
	- Dieldrin	µg/L		Not Detected	Not Detected	can not found
	- p,p'-DDE	µg/L		Not Detected	Not Detected	can not found
	- o,p'-DDD	µg/L		Not Detected	Not Detected	can not found
	- Endrin	µg/L		Not Detected	Not Detected	can not found
	- Beta Endosulfan	µg/L		Not Detected	Not Detected	can not found
	- p,p'-DDD	µg/L		Not Detected	Not Detected	can not found
	- o,p'-DDT	µg/L		Not Detected	Not Detected	can not found
	- p,p'-DDT	µg/L		Not Detected	Not Detected	can not found
	- Endosulfan sulfate	µg/L		Not Detected	Not Detected	can not found
30	Carbamate ***					
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	Not Detected	can not found
	- Isoprocab	µg/L		Not Detected	Not Detected	can not found
	- Fenobucarb	µg/L		Not Detected	Not Detected	can not found
	- Promecarb	µg/L		Not Detected	Not Detected	can not found
	- Carbofuran	µg/L		Not Detected	Not Detected	can not found
	- Methiocarb	µg/L		Not Detected	Not Detected	can not found
	- Methomyl	µg/L		Not Detected	Not Detected	can not found
	- Aldicarb	µg/L		Not Detected	Not Detected	can not found
	- Oxamyl	µg/L		Not Detected	Not Detected	can not found
	- Metolcarb	µg/L		Not Detected	Not Detected	can not found
31	Organophosphate *					
	- Dichlorvos (DDVP)	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by GC/FPD Technique.	Not Detected	Not Detected	can not found
	- Mevinphos	µg/L		Not Detected	Not Detected	can not found
	- Diazinon	µg/L		Not Detected	Not Detected	can not found
	- Dicrotophos	µg/L		Not Detected	Not Detected	can not found
	- Monocrotophos	µg/L		Not Detected	Not Detected	can not found
	- Dimethoate	µg/L		Not Detected	Not Detected	can not found

continue

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## TEST REPORT

**Analysis No. :** R22-1897  
**Customer :** Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address :** 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact :** Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Report Date :** 13/07/22  
**Received Date :** 07/07/22  
**Analysis Date :** 07-20/07/22  
**Sampling Date \* :** 06/07/22  
**Sampling By \* :** TET  
**Type of Sample :** Wastewater  
**Job No. :** S650347/July

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard
				2207-WW0129	2207-WW0131	
				W3	W5	
32	- Pirimiphos-methyl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by GC/FPD Technique.	Not Detected	Not Detected	can not found
	- Chlorpyrifos	µg/L		Not Detected	Not Detected	can not found
	- Parathion-methyl	µg/L		Not Detected	Not Detected	can not found
	- Pirimiphos	µg/L		Not Detected	Not Detected	can not found
	- Malathion	µg/L		Not Detected	Not Detected	can not found
	- Fenitrothion	µg/L		Not Detected	Not Detected	can not found
	- Parathion	µg/L		Not Detected	Not Detected	can not found
	- Prothiofos	µg/L		Not Detected	Not Detected	can not found
	- Methidathion	µg/L		Not Detected	Not Detected	can not found
	- Profenofos	µg/L		Not Detected	Not Detected	can not found
	- Ethion	µg/L		Not Detected	Not Detected	can not found
	- Triazophos	µg/L		Not Detected	Not Detected	can not found
	- EPN	µg/L		Not Detected	Not Detected	can not found
	- Phosalone	µg/L		Not Detected	Not Detected	can not found
	- Azinphos-ethyl	µg/L		Not Detected	Not Detected	can not found
	Pyrethroid *					
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	Not Detected	can not found
	- Bifenthrin	µg/L		Not Detected	Not Detected	can not found
	- Phenothrin	µg/L		Not Detected	Not Detected	can not found
	- Lambda-Cyhalothrin	µg/L		Not Detected	Not Detected	can not found
	- Cypermethrin	µg/L		Not Detected	Not Detected	can not found
	- Cyfluthrin	µg/L		Not Detected	Not Detected	can not found
	- Fenvalerate	µg/L		Not Detected	Not Detected	can not found

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

\*\*\* Subcontractor "Not TISI Accredited"

: W3 = น้ำเสียรวมเข้า Wet Well ของระบบบำบัดน้ำเสียแบบแผ่นจานหมุนชีวภาพ (RBC) ในเขตอุตสาหกรรมส่งออก (พื้นที่โครงการ ระยะที่ 1) (47P 0680507 UTM 1498068)  
W5 = น้ำเสียก่อนเข้า Automatic Screening ของระบบ Extended Activated Sludge ของพื้นที่โครงการระยะที่ 2 (47P 0679752 UTM 1499563)

**Method** (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> 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 the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

13/07/22



Mrs. Pornpip Pethshee

Laboratory Manager

13/07/22

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## TEST REPORT

**Analysis No.** : R22-2233

**Customer** : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact** : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

**Sample Conditions** : 2208-WW0305 = gray turbid/high black sediment/foul smell,

Flow Rate = 1,680 m<sup>3</sup>/Day, Odor = smell, 2208-WW0307 = gray turbid/high black sediment/foul smell,

Flow Rate = 3,448 m<sup>3</sup>/Day, Odor = smell

**Report Date** : 15/09/22

**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.** : S650347Aug

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard
				2208-WW0305	2208-WW0307	
				W3	W5	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.0	30.4	45
2	pH *	-	Electrometric Method (SM 4500 B)	7.53	7.11	5.5-9.0
3	Color (Original pH) *	ADMI	} ADMI Weighted-Ordinate	39	33	600
	Color (pH 7) *	ADMI		55	59	600
4	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	40.0	76.3	200
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	750	698	3,000
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	44	55	500
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	144	144	750
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	5.9	5.0	10
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	24.11	13.06	100
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	19.52	9.47	-
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	12.26	8.79	-
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	0.025	0.2
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	1
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	0.62	1
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	0.72	0.94	1
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	< 0.01	1
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	0.03	0.66	0.75
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	< 0.02	0.25
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.005
20	As *	mg/L	} Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0015	0.0021	0.25
21	Se *	mg/L		< 0.0005	< 0.0005	0.02
22	Ba	mg/L	} Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> edition, 2017, part 3030 F and part 3120 B	0.11	0.08	1.0
23	Cd	mg/L		< 0.02	< 0.02	0.03
24	Cu	mg/L		0.27	1.15	2.0
25	Mn	mg/L		0.92	0.12	5.0
26	Ni	mg/L		< 0.02	0.09	1.0
27	Pb	mg/L		< 0.04	< 0.04	0.2
28	Zn	mg/L		0.14	1.59	5.0

continue

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## TEST REPORT

**Analysis No.** : R22-2233

**Customer** : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact** : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

**Report Date** : 15/09/22

**Received Date** : 10/08/22

**Analysis Date** : 10-30/08/22

**Sampling Date \*** : 09/08/22

**Sampling By \*** : TET

**Type of Sample** : Wastewater

**Job No.** : S650347Aug

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard
				2208-WW0305	2208-WW0307	
				W3	W5	
29	Organochlorine *		LLE, GC/ECD (SM 6630 B)			
	- Alpha-BHC	µg/L		Not Detected	Not Detected	can not found
	- Beta-BHC	µg/L		Not Detected	Not Detected	can not found
	- Gamma-BHC (Lindane)	µg/L		Not Detected	Not Detected	can not found
	- Heptachlor	µg/L		Not Detected	Not Detected	can not found
	- Aldrin	µg/L		Not Detected	Not Detected	can not found
	- Dicofol	µg/L		Not Detected	Not Detected	can not found
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	Not Detected	can not found
	- Heptachlor-endo-epoxide (tran-isomer A)	µg/L		Not Detected	Not Detected	can not found
	- Gamma-Chlordane	µg/L		Not Detected	Not Detected	can not found
	- o,p'-DDE	µg/L		Not Detected	Not Detected	can not found
	- Alpha Endosulfan	µg/L		Not Detected	Not Detected	can not found
	- Alpha-Chlordane	µg/L		Not Detected	Not Detected	can not found
	- Dieldrin	µg/L		Not Detected	Not Detected	can not found
	- p,p'-DDE	µg/L		Not Detected	Not Detected	can not found
	- o,p'-DDD	µg/L		Not Detected	Not Detected	can not found
	- Endrin	µg/L		Not Detected	Not Detected	can not found
	- Beta Endosulfan	µg/L		Not Detected	Not Detected	can not found
	- p,p'-DDD	µg/L		Not Detected	Not Detected	can not found
	- o,p'-DDT	µg/L		Not Detected	Not Detected	can not found
	- p,p'-DDT	µg/L		Not Detected	Not Detected	can not found
	- Endosulfan sulfate	µg/L		Not Detected	Not Detected	can not found
30	Carbamate ***		In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.			
	- Carbaryl	µg/L		Not Detected	Not Detected	can not found
	- Isoproc carb	µg/L		Not Detected	Not Detected	can not found
	- Fenobucarb	µg/L		Not Detected	Not Detected	can not found
	- Promecarb	µg/L		Not Detected	Not Detected	can not found
	- Carbofuran	µg/L		Not Detected	Not Detected	can not found
	- Methiocarb	µg/L		Not Detected	Not Detected	can not found
	- Methomyl	µg/L		Not Detected	Not Detected	can not found
	- Aldicarb	µg/L		Not Detected	Not Detected	can not found
	- Oxamyl	µg/L		Not Detected	Not Detected	can not found
	- Metolcarb	µg/L		Not Detected	Not Detected	can not found
31	Organophosphate *		LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>			
	- Dichlorvos (DDVP)	µg/L		Not Detected	Not Detected	can not found
	- Mevinphos	µg/L		Not Detected	Not Detected	can not found
	- Diazinon	µg/L		Not Detected	Not Detected	can not found
	- Dicrotophos	µg/L		Not Detected	Not Detected	can not found
	- Monocrotophos	µg/L		Not Detected	Not Detected	can not found
	- Dimethoate	µg/L		Not Detected	Not Detected	can not found

continue

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## TEST REPORT

**Analysis No.** : R22-2233  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact** : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Report Date** : 15/09/22  
**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.** : S650347Aug

Item	Parameter	Unit	Method <sup>(A)</sup>	2208-WW0305	2208-WW0307	Standard
				W3	W5	
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	can not found
	- Chlorpyrifos	µg/L		Not Detected	Not Detected	can not found
	- Parathion-methyl	µg/L		Not Detected	Not Detected	can not found
	- Pirimiphos	µg/L		Not Detected	Not Detected	can not found
	- Malathion	µg/L		Not Detected	Not Detected	can not found
	- Fenitrothion	µg/L		Not Detected	Not Detected	can not found
	- Parathion	µg/L		Not Detected	Not Detected	can not found
	- Prothiofos	µg/L		Not Detected	Not Detected	can not found
	- Methidathion	µg/L		Not Detected	Not Detected	can not found
	- Profenofos	µg/L		Not Detected	Not Detected	can not found
	- Ethion	µg/L		Not Detected	Not Detected	can not found
	- Triazophos	µg/L		Not Detected	Not Detected	can not found
	- EPN	µg/L		Not Detected	Not Detected	can not found
	- Phosalone	µg/L		Not Detected	Not Detected	can not found
	- Azinphos-ethyl	µg/L		Not Detected	Not Detected	can not found
	Pyrethroid *					
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	Not Detected	can not found
	- Bifenthrin	µg/L		Not Detected	Not Detected	can not found
	- Phenothrin	µg/L		Not Detected	Not Detected	can not found
	- Lambda-Cyhalothrin	µg/L		Not Detected	Not Detected	can not found
	- Cypermethrin	µg/L		Not Detected	Not Detected	can not found
	- Cyfluthrin	µg/L		Not Detected	Not Detected	can not found
	- Fenvalerate	µg/L		Not Detected	Not Detected	can not found

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

\*\*\* Subcontractor "Not TISI Accredited"

: W3 = น้ำเสียรวมเข้า Wet Well ของระบบบำบัดน้ำเสียแบบแผ่นจานหมุนชีวภาพ (RBC) ในเขตอุตสาหกรรมส่งออก (พื้นที่โครงการ ระยะที่ 1) (47P 0686530 UTM 1498082)  
W5 = น้ำเสียก่อนเข้า Automatic Screening ของระบบ Extended Activated Sludge ของพื้นที่โครงการระยะที่ 2 (47P 0679756 UTM 1499565)

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

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 รัชชัช พรหมสวัสดิ์, วิทยาลัยเกษตรและเทคโนโลยีสุพรรณบุรี

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

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

Ms. Wareerut Prachumdaeng

Chief of Laboratory

15.09.22



Mrs. Pornpip Pethshee

Laboratory Manager

15.09.22

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





## TEST REPORT

**Analysis No. :** R22-2508

**Customer :** Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address :** 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact :** Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

**Report Date :** 13/09/22

**Received Date :** 06/09/22

**Analysis Date :** 06-12/09/22

**Sampling Date \* :** 05/09/22

**Sampling By \* :** TET

**Type of Sample :** Wastewater

**Sample Conditions :** 2209-WW0151 = yellow turbid/high black sediment/foul smell/covered with oil slick,

**Job No. :** S650347/Sep

Flow Rate = 2,280 m<sup>3</sup>/Day, Odor = smell

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2209-WW0151	
				W3	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.8	45
2	pH *	-	Electrometric Method (SM 4500 B)	7.98	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	74	600
	Color (pH 7) *	ADMI		56	600
4	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	27.5	200
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	693	3,000
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	44	500
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	148	750
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	4.3	10
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	22.27	100
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	18.36	-
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	6.05	-
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	0.2
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	1
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	3.59	1
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	0.63	1
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	1
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	< 0.02	0.75
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	0.25
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
20	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0017	0.25
21	Se *	mg/L		< 0.0005	0.02
22	Ba	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> edition, 2017, part 3030 F and part 3120 B	0.05	1.0
23	Cd	mg/L		< 0.02	0.03
24	Cu	mg/L		0.15	2.0
25	Mn	mg/L		0.31	5.0
26	Ni	mg/L		< 0.02	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		0.09	5.0

continue

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## TEST REPORT

Analysis No. : R22-2508

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 13/09/22

Received Date : 06/09/22

Analysis Date : 06-19/09/22

Sampling Date \* : 05/09/22

Sampling By \* : TET

Type of Sample : Wastewater

Job No. : S650347/Sep

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2209-WW0151	
				W3	
29	Organochlorine *				
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	can not found
	- Beta-BHC	µg/L		Not Detected	can not found
	- Gamma-BHC (Lindane)	µg/L		Not Detected	can not found
	- Heptachlor	µg/L		Not Detected	can not found
	- Aldrin	µg/L		Not Detected	can not found
	- Dicofol	µg/L		Not Detected	can not found
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	can not found
	- Heptachlor-endo-epoxide (tran-isomer A)	µg/L		Not Detected	can not found
	- Gamma-Chlordane	µg/L		Not Detected	can not found
	- o,p'-DDE	µg/L		Not Detected	can not found
	- Alpha Endosulfan	µg/L		Not Detected	can not found
	- Alpha-Chlordane	µg/L		Not Detected	can not found
	- Dieldrin	µg/L		Not Detected	can not found
	- p,p'-DDE	µg/L		Not Detected	can not found
	- o,p'-DDD	µg/L		Not Detected	can not found
	- Endrin	µg/L		Not Detected	can not found
	- Beta Endosulfan	µg/L		Not Detected	can not found
	- p,p'-DDD	µg/L		Not Detected	can not found
	- o,p'-DDT	µg/L		Not Detected	can not found
	- p,p'-DDT	µg/L		Not Detected	can not found
	- Endosulfan sulfate	µg/L		Not Detected	can not found
30	Carbamate ***				
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	can not found
	- Isoprocab	µg/L		Not Detected	can not found
	- Fenobucarb	µg/L		Not Detected	can not found
	- Promecarb	µg/L		Not Detected	can not found
	- Carbofuran	µg/L		Not Detected	can not found
	- Methiocarb	µg/L		Not Detected	can not found
	- Methomyl	µg/L		Not Detected	can not found
	- Aldicarb	µg/L		Not Detected	can not found
	- Oxamyl	µg/L		Not Detected	can not found
	- Metolcarb	µg/L		Not Detected	can not found
31	Organophosphate *				
	- Dichlorvos (DDVP)	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	can not found
	- Mevinphos	µg/L		Not Detected	can not found
	- Diazinon	µg/L		Not Detected	can not found
	- Dicrotophos	µg/L		Not Detected	can not found
	- Monocrotophos	µg/L		Not Detected	can not found
	- Dimethoate	µg/L		Not Detected	can not found

continue

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## TEST REPORT

**Analysis No. :** R22-2508  
**Customer :** Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address :** 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact :** Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Report Date :** 13/09/22  
**Received Date :** 06/09/22  
**Analysis Date :** 06-12/09/22  
**Sampling Date \* :** 05/09/22  
**Sampling By \* :** TET  
**Type of Sample :** Wastewater  
**Job No. :** S650347/Sep

Item	Parameter	Unit	Method <sup>(A)</sup>	2209-WW0151	Standard
				W3	
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	can not found
	- Chlorpyrifos	µg/L		Not Detected	can not found
	- Parathion-methyl	µg/L		Not Detected	can not found
	- Pirimiphos	µg/L		Not Detected	can not found
	- Malathion	µg/L		Not Detected	can not found
	- Fenitrothion	µg/L		Not Detected	can not found
	- Parathion	µg/L		Not Detected	can not found
	- Prothiofos	µg/L		Not Detected	can not found
	- Methidathion	µg/L		Not Detected	can not found
	- Profenofos	µg/L		Not Detected	can not found
	- Ethion	µg/L		Not Detected	can not found
	- Triazophos	µg/L		Not Detected	can not found
	- EPN	µg/L		Not Detected	can not found
	- Phosalone	µg/L		Not Detected	can not found
	- Azinphos-ethyl	µg/L		Not Detected	can not found
	Pyrethroid *				
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	can not found
	- Bifenthrin	µg/L		Not Detected	can not found
	- Phenothrin	µg/L		Not Detected	can not found
	- Lambda-Cyhalothrin	µg/L		Not Detected	can not found
	- Cypermethrin	µg/L		Not Detected	can not found
	- Cyfluthrin	µg/L		Not Detected	can not found
	- Fenvalerate	µg/L		Not Detected	can not found

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

\*\*\* Subcontractor "Not TISI Accredited"

: W3 = น้ำเสียรวมเข้า Wet Well ของระบบบำบัดน้ำเสียแบบแผ่นจานหมุนชีวภาพ (RBC) ในเขตอุตสาหกรรมส่งออก (พื้นที่โครงการ ระยะที่ 1) (47P 0680530 UTM 1498082)

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

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

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

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

Ms. Wareerut Prachumdaeng

Chief of Laboratory

13/09/22



Mrs. Pomtip Pethshee

Laboratory Manager

13/09/22

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## TEST REPORT

Analysis No. : R22-2625

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Sample Conditions : 2209-WW0431 = black turbid/high black sediment/covered with oil slick/foul smell,

Flow Rate = 3,490 m<sup>3</sup>/Day, Odor = smell

Report Date : 04/10/22

Received Date : 15/09/22

Analysis Date : 15-20/09/22

Sampling Date \* : 14/09/22

Sampling By \* : TET

Type of Sample : Wastewater

Job No. : S650347/Sep/1

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	
				2209-WW0431	Standard
				W5	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.4	45
2	pH *	-	Electrometric Method (SM 4500 B)	7.85	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate	336	600
	Color (pH 7) *	ADMI	Spectrophotometric Method (SM 2120 F)	288	600
4	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	53.7	200
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	919	3,000
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	62	500
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	233	750
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	7.7	10
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	16.86	100
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	10.23	-
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	12.11	-
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	0.487	0.2
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	0.097	1
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	0.97	1
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	0.78	1
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	1
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	0.60	0.75
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	0.25
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
20	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0023	0.25
21	Se *	mg/L		< 0.0005	0.02
22	Ba	mg/L		0.05	1.0
23	Cd	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> edition, 2017, part 3030 F and part 3120 B	< 0.02	0.03
24	Cu	mg/L		1.47	2.0
25	Mn	mg/L		0.19	5.0
26	Ni	mg/L		0.04	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		1.65	5.0

continue

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## TEST REPORT

Analysis No. : R22-2625

Report Date : 04/10/22

Customer : Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู

Received Date : 15/09/22

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

Analysis Date : 15-30/09/22

Sampling Date \* : 14/09/22

Sampling By \* : TET

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Type of Sample : Wastewater

Job No. : S650347/Sep/1

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard
				2209-WW0431		
				W5		
29	Organochlorine *		LLE, GC/ECD (SM 6630 B)			
	- Alpha-BHC	µg/L		Not Detected	can not found	
	- Beta-BHC	µg/L		Not Detected	can not found	
	- Gamma-BHC (Lindane)	µg/L		Not Detected	can not found	
	- Heptachlor	µg/L		Not Detected	can not found	
	- Aldrin	µg/L		Not Detected	can not found	
	- Dicofol	µg/L		Not Detected	can not found	
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	can not found	
	- Heptachlor-endo-epoxide (tran-isomer A)	µg/L		Not Detected	can not found	
	- Gamma-Chlordane	µg/L		Not Detected	can not found	
	- o,p'-DDE	µg/L		Not Detected	can not found	
	- Alpha Endosulfan	µg/L		Not Detected	can not found	
	- Alpha-Chlordane	µg/L		Not Detected	can not found	
	- Dieldrin	µg/L		Not Detected	can not found	
	- p,p'-DDE	µg/L		Not Detected	can not found	
	- o,p'-DDD	µg/L		Not Detected	can not found	
	- Endrin	µg/L		Not Detected	can not found	
	- Beta Endosulfan	µg/L		Not Detected	can not found	
	- p,p'-DDD	µg/L		Not Detected	can not found	
	- o,p'-DDT	µg/L		Not Detected	can not found	
	- p,p'-DDT	µg/L	Not Detected	can not found		
	- Endosulfan sulfate	µg/L	Not Detected	can not found		
30	Carbamate ***		In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.			
	- Carbaryl	µg/L		Not Detected	can not found	
	- Isoproc carb	µg/L		Not Detected	can not found	
	- Fenobucarb	µg/L		Not Detected	can not found	
	- Promecarb	µg/L		Not Detected	can not found	
	- Carbofuran	µg/L		Not Detected	can not found	
	- Methiocarb	µg/L		Not Detected	can not found	
	- Methomyl	µg/L		Not Detected	can not found	
	- Aldicarb	µg/L		Not Detected	can not found	
	- Oxamyl	µg/L		Not Detected	can not found	
	- Metolcarb	µg/L	Not Detected	can not found		
31	Organophosphate *		LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>			
	- Dichlorvos (DDVP)	µg/L		Not Detected	can not found	
	- Mevinphos	µg/L		Not Detected	can not found	
	- Diazinon	µg/L		Not Detected	can not found	
	- Dicrotophos	µg/L		Not Detected	can not found	
	- Monocrotophos	µg/L		Not Detected	can not found	
	- Dimethoate	µg/L		Not Detected	can not found	

continue

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## TEST REPORT

**Analysis No.** : R22-2625  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact** : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Report Date** : 04/10/22  
**Received Date** : 15/09/22  
**Analysis Date** : 15-20/09/22  
**Sampling Date \*** : 14/09/22  
**Sampling By \*** : TET  
**Type of Sample** : Wastewater  
**Job No.** : S650347/Sep/1

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2209-WW0431	
				W5	
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	can not found
	- Chlorpyrifos	µg/L		Not Detected	can not found
	- Parathion-methyl	µg/L		Not Detected	can not found
	- Pirimiphos	µg/L		Not Detected	can not found
	- Malathion	µg/L		Not Detected	can not found
	- Fenitrothion	µg/L		Not Detected	can not found
	- Parathion	µg/L		Not Detected	can not found
	- Prothiofos	µg/L		Not Detected	can not found
	- Methidathion	µg/L		Not Detected	can not found
	- Profenofos	µg/L		Not Detected	can not found
	- Ethion	µg/L		Not Detected	can not found
	- Triazophos	µg/L		Not Detected	can not found
	- EPN	µg/L		Not Detected	can not found
	- Phosalone	µg/L		Not Detected	can not found
	- Azinphos-ethyl	µg/L		Not Detected	can not found
	Pyrethroid *				
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	can not found
	- Bifenthrin	µg/L		Not Detected	can not found
	- Phenothrin	µg/L		Not Detected	can not found
	- Lambda-Cyhalothrin	µg/L		Not Detected	can not found
	- Cypermethrin	µg/L		Not Detected	can not found
	- Cyfluthrin	µg/L		Not Detected	can not found
	- Fenvalerate	µg/L		Not Detected	can not found

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

\*\*\* Subcontractor "Not TISI Accredited"

: W5 = น้ำเสียก่อนเข้า Automatic Screening ของระบบ Extended Activated Sludge ของพื้นที่โครงการระยะที่ 2 (47P 0679741 UTM 1499567)

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

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรรณสวัสดิ์, วิบูลย์ลักษณ์ วิศุทธิ์ศักดิ์

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

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

Ms. Wareerut Prachumdaeng

Chief of Laboratory

04.10.22



Mrs. Pornpip Pethshee

Laboratory Manager

04.10.22

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





## TEST REPORT

Analysis No. : R22-2882

Received Date: 11/10/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 18/10/22

Analysis Date : 10-17/10/22

Job No. : S650347/Oct

Sampling Date \* : 10/10/22

Sampling By \* : TET

Type of Sample : Wastewater

Sample Conditions : 2210-WW0296 = black turbid/high black sediment/foul smell, Flow Rate = 1,716 m<sup>3</sup>/Day, Odor = smell

2210-WW0298 = black turbid/high black sediment/foul smell, Flow Rate = 3,678 m<sup>3</sup>/Day, Odor = smell

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2210-WW0296	2210-WW0298		
				W3	W5		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	29.7	29.0	45	10/10/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.74	7.55	5.5-9.0	10/10/22
3	Color (Original pH) *	ADMI	} ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	101	99	600	12/10/22
	Color (pH 7) *	ADMI		97	86	600	12/10/22
4	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	26.9	155.1	200	14/10/22
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	858	600	3,000	14/10/22
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	42	67	500	12-17/10/22
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	157	199	750	12/10/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	7.7	4.8	10	17/10/22
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	24.68	9.63	100	14/10/22
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	18.06	2.71	-	14/10/22
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	5.79	0.68	-	12, 14/10/22
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	0.005	0.106	0.2	17/10/22
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	1	14/10/22
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	0.41	1	11/10/22
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	0.07	1	14/10/22
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	< 0.01	1	11/10/22
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	< 0.02	0.05	0.75	14/10/22
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	< 0.02	0.25	11/10/22
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.005	12/10/22
20	As *	mg/L	} Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0013	0.0031	0.25	14/10/22
21	Se *	mg/L		< 0.0005	< 0.0005	0.02	17/10/22
22	Ba	mg/L	} Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> edition, 2017, part 3030 F and part 3120 B	0.06	0.09	1.0	14/10/22
23	Cd	mg/L		< 0.02	< 0.02	0.03	14/10/22
24	Cu	mg/L		0.12	0.30	2.0	14/10/22
25	Mn	mg/L		0.28	0.16	5.0	14/10/22
26	Ni	mg/L		< 0.02	0.04	1.0	14/10/22
27	Pb	mg/L		< 0.04	< 0.04	0.2	14/10/22
28	Zn	mg/L		0.10	1.05	5.0	14/10/22

continue

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## TEST REPORT

**Analysis No. :** R22-2882

**Received Date:** 11/10/22

**Customer :** Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address :** 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact :** Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

**Report Date :** 18/10/22

**Analysis Date :** 10-28/10/22

**Job No. :** S650347/Oct

**Sampling Date \* :** 10/10/22

**Sampling By \* :** TET

**Type of Sample :** Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2210-WW0296	2210-WW0298		
				W3	W5		
29	Organochlorine *						
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	Not Detected	can not found	11-14/10/22
	- Beta-BHC	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Gamma-BHC (Lindane)	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Heptachlor	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Aldrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Dicofol	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Heptachlor-endo-epoxide (tran-isomer A)	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Gamma-Chlordane	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- o,p'-DDE	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Alpha Endosulfan	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Alpha-Chlordane	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Dieldrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- p,p'-DDE	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- o,p'-DDD	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Endrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Beta Endosulfan	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- p,p'-DDD	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- o,p'-DDT	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- p,p'-DDT	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Endosulfan sulfate	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
30	Carbamate ***						
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	Not Detected	can not found	19-28/10/22
	- Isoprocab	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
	- Fenobucarb	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
	- Promecarb	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
	- Carbofuran	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
	- Methiocarb	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
	- Methomyl	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
	- Aldicarb	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
	- Oxamyl	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
	- Metolcarb	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
31	Organophosphate *						
	- Dichlorvos (DDVP)	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	can not found	11-18/10/22
	- Mevinphos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Diazinon	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Dicrotophos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Monocrotophos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Dimethoate	µg/L		Not Detected	Not Detected	can not found	11-18/10/22

continue

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## TEST REPORT

Analysis No. : R22-2882

Received Date: 11/10/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 18/10/22

Analysis Date : 10-18/10/22

Job No. : S650347/Oct

Sampling Date \* : 10/10/22

Sampling By \* : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2210-WW0296	2210-WW0298		
				W3	W5		
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	can not found	11-18/10/22
	- Chlorpyrifos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Parathion-methyl	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Pirimiphos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Malathion	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Fenitrothion	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Parathion	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Prothiofos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Methidathion	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Profenofos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Ethion	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Triazophos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- EPN	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Phosalone	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Azinphos-ethyl	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	Pyrethroid *						
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	Not Detected	can not found	11-14/10/22
	- Bifenthrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Phenothrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Lambda-Cyhalothrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Cypermethrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Cyfluthrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Fenvalerate	µg/L		Not Detected	Not Detected	can not found	11-14/10/22

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

\*\*\* Subcontractor "Not TISI Accredited"

: W3 = น้ำเสียรวมเข้า Wet Well ของระบบบำบัดน้ำเสียแบบแผ่นจานหมุนชีวภาพ (RBC) ในเขตอุตสาหกรรมส่งออก (พื้นที่โครงการ ระยะที่ 1) (47P 0680521 UTM 1498087)  
W5 = น้ำเสียก่อนเข้า Automatic Screening ของระบบ Extended Activated Sludge ของพื้นที่โครงการระยะที่ 2 (47P 0679749 UTM 1499564)

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> 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 the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

18/10/22



Mrs. Pornpip Pethshee

Laboratory Manager

18/10/22

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

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## TEST REPORT

Analysis No. : R22-3306

Report Date : 29/11/22

Received Date: 21/11/22

Analysis Date : 18-28/11/22

Customer : Technical Division of Thai Environmental Technic Limited

Job No. : S650347/Nov

For นิคมอุตสาหกรรมบางปู

Sampling Date \* : 18/11/22

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

Sampling By \* : TET

Type of Sample : Wastewater

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Sample Conditions : 2211-WW0638 = yellow turbid/high black sediment/covered with oil slick/smell, Flow Rate = 1,688 m<sup>3</sup>/Day, Odor = smell

2211-WW0640 = black turbid/high black sediment/covered oil slick/foul smell, Flow Rate = 3,352 m<sup>3</sup>/Day, Odor = smell

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2211-WW0638	2211-WW0640		
				W3	W5		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.1	30.7	45	18/11/22
2	pH *	-	Electrometric Method (SM 4500 B)	8.10	7.87	5.5-9.0	18/11/22
3	Color (Original pH) *	ADMI	} ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	74	202	600	25/11/22
	Color (pH 7) *	ADMI		60	188	600	25/11/22
4	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	30.5	69.3	200	23/11/22
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	533	909	3,000	24/11/22
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	23	78	500	23-28/11/22
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	125	251	750	23/11/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	6.9	5.4	10	24/11/22
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	35.21	23.18	100	23/11/22
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	28.98	17.97	-	23/11/22
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	8.87	38.35	-	23/11/22
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	2.085	0.2	23, 25/11/22
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	0.055	1	25/11/22
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	0.03	0.19	1	24/11/22
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	0.48	1	25/11/22
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	< 0.01	1	22/11/22
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	< 0.02	0.48	0.75	25/11/22
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	< 0.02	0.25	22/11/22
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.005	24/11/22
20	As *	mg/L	} Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0013	0.0048	0.25	23/11/22
21	Se *	mg/L		< 0.0005	< 0.0005	0.02	23/11/22
22	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.06	0.12	1.0	25/11/22
23	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	< 0.02	0.03	28/11/22
24	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.13	3.75 *	2.0	25/11/22
25	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.44	0.14	5.0	25/11/22
26	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.10	1.0	25/11/22
27	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	< 0.04	0.2	28/11/22
28	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.08	1.77	5.0	25/11/22

continue

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





## TEST REPORT

**Analysis No. :** R22-3306

**Received Date:** 21/11/22

**Customer :** Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address :** 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact :** Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

**Report Date :** 29/11/22

**Analysis Date :** 18-29/11/22

**Job No. :** S650347/Nov

**Sampling Date \* :** 18/11/22

**Sampling By \* :** TET

**Type of Sample :** Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2211-WW0638	2211-WW0640		
				W3	W5		
29	Organochlorine *						
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	Not Detected	can not found	21-25/11/22
	- Beta-BHC	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Gamma-BHC (Lindane)	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Heptachlor	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Aldrin	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Dicofof	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Heptachlor-endo-epoxide (trans-isomer A)	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Gamma-Chlordane	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- o,p'-DDE	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Alpha Endosulfan	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Alpha-Chlordane	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Dieldrin	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- p,p'-DDE	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- o,p'-DDD	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Endrin	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Beta Endosulfan	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- p,p'-DDD	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- o,p'-DDT	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- p,p'-DDT	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Endosulfan sulfate	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
30	Carbamate ***						
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	Not Detected	can not found	22-29/11/22
	- Isoprocab	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
	- Fenobucarb	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
	- Promecarb	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
	- Carbofuran	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
	- Methiocarb	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
	- Methomyl	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
	- Aldicarb	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
	- Oxamyl	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
	- Metolcarb	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
31	Organophosphate *						
	- Dichlorvos (DDVP)	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	can not found	21-25/11/22
	- Mevinphos	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Diazinon	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Dicrotophos	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Monocrotophos	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Dimethoate	µg/L		Not Detected	Not Detected	can not found	21-25/11/22

continue

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

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## TEST REPORT

Analysis No. : R22-3306

Received Date: 21/11/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 29/11/22

Analysis Date : 18-28/11/22

Job No. : S650347/Nov

Sampling Date \* : 18/11/22

Sampling By \* : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2211-WW0638	2211-WW0640		
				W3	W5		
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	can not found	21-25/11/22
	- Chlorpyrifos	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Parathion-methyl	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Pirimiphos	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Malathion	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Fenitrothion	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Parathion	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Prothiofos	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Methidathion	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Profenofos	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Ethion	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Triazophos	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- EPN	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Phosalone	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Azinphos-ethyl	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	Pyrethroid *						
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	Not Detected	can not found	21-25/11/22
	- Bifenthrin	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Phenothrin	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Lambda-Cyhalothrin	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Cypermethrin	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Cyfluthrin	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Fenvalerate	µg/L		Not Detected	Not Detected	can not found	21-25/11/22

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

\*\*\* Subcontractor "Not TISI Accredited"

: W3 = น้ำเสียรวมเข้า Wet Well ของระบบบำบัดน้ำเสียแบบแผ่นจานหมุนชีวภาพ (RBC) ในเขตอุตสาหกรรมส่งออก (พื้นที่โครงการ ระยะที่ 1) (47P 0680521 UTM 1498087)  
W5 = น้ำเสียก่อนเข้า Automatic Screening ของระบบ Extended Activated Sludge ของพื้นที่โครงการระยะที่ 2 (47P 0679749 UTM 1499564)

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> 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 the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Reviewed by

Mrs. Wareerut Prachumdaeng  
Chief of Laboratory



Approved by

Mrs. Pornpip Pethshee  
Laboratory Manager

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## TEST REPORT

Analysis No. : R22-3559

Received Date: 12/12/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 28/12/22

Analysis Date : 09-19/12/22

Job No. : S650347/Dec

Sampling Date \* : 09/12/22

Sampling By \* : TET

Type of Sample : Wastewater

Sample Conditions : 2212-WW0348 = yellow turbid/high black sediment/covered with oil slick/smell, Flow Rate = 1,725 m<sup>3</sup>/Day, Odor = smell

2212-WW0350 = black turbid/high black sediment/covered with oil slick/smell, Flow Rate = 3,175 m<sup>3</sup>/Day, Odor = smell

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2212-WW0348	2212-WW0350		
				W3	W5		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.9	31.2	45	09/12/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.66	8.23	5.5-9.0	09/12/22
3	Color (Original pH) *	ADMI	} ADMI Weighted-Ordinate	70	140	600	13/12/22
	Color (pH 7) *	ADMI		62	129	600	13/12/22
4	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	33.6	64.2	200	14/12/22
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	921	615	3,000	14/12/22
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	28	84	500	09-14/12/22
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	178	235	750	14/12/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	2.0	4.4	10	15/12/22
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	30.98	21.32	100	19/12/22
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	28.14	13.36	-	19/12/22
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	7.60	20.26	-	15/12/22
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	0.407	0.2	15/12/22
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	1	15/12/22
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	3.97	1	13/12/22
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	< 0.01	1	15/12/22
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	< 0.01	1	12/12/22
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	0.04	0.25	0.75	14/12/22
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	< 0.02	0.25	14/12/22
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.005	16/12/22
20	As *	mg/L	} Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0005	0.0023	0.25	15/12/22
21	Se *	mg/L		< 0.0005	< 0.0005	0.02	15/12/22
22	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.07	0.08	1.0	14/12/22
23	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	< 0.02	0.03	14/12/22
24	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.23	1.85	2.0	14/12/22
25	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.94	0.11	5.0	14/12/22
26	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.02	0.06	1.0	14/12/22
27	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	< 0.04	0.2	14/12/22
28	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.10	1.47	5.0	14/12/22

continue

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## TEST REPORT

Analysis No. : R22-3559

Received Date: 12/12/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 28/12/22

Analysis Date : 09-23/12/22

Job No. : S650347/Dec

Sampling Date \* : 09/12/22

Sampling By \* : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2212-WW0348	2212-WW0350		
				W3	W5		
29	Organochlorine *						
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	Not Detected	can not found	13-15/12/22
	- Beta-BHC	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Gamma-BHC (Lindane)	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Heptachlor	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Aldrin	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Dicolol	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Heptachlor-endo-epoxide (trans-isomer A)	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Gamma-Chlordane	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- o,p'-DDE	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Alpha Endosulfan	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Alpha-Chlordane	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Dieldrin	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- p,p'-DDE	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- o,p'-DDD	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Endrin	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Beta Endosulfan	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- p,p'-DDD	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- o,p'-DDT	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- p,p'-DDT	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Endosulfan sulfate	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
30	Carbamate ***						
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	Not Detected	can not found	15-23/12/22
	- Isoprocab	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
	- Fenobucarb	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
	- Promecarb	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
	- Carbofuran	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
	- Methiocarb	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
	- Methomyl	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
	- Aldicarb	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
	- Oxamyl	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
	- Metolcarb	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
31	Organophosphate *						
	- Dichlorvos (DDVP)	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	can not found	13-15/12/22
	- Mevinphos	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Diazinon	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Dicrotophos	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Monocrotophos	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Dimethoate	µg/L		Not Detected	Not Detected	can not found	13-15/12/22

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## TEST REPORT

Analysis No. : R22-3559

Received Date: 12/12/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 28/12/22

Analysis Date : 09-19/12/22

Job No. : S650347/Dec

Sampling Date \* : 09/12/22

Sampling By \* : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2212-WW0348	2212-WW0350		
				W3	W5		
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	can not found	13-15/12/22
	- Chlorpyrifos	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Parathion-methyl	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Pirimiphos	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Malathion	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Fenitrothion	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Parathion	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Prothiofos	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Methidathion	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Profenofos	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Ethion	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Triazophos	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- EPN	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Phosalone	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Azinphos-ethyl	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	Pyrethroid *						
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	Not Detected	can not found	13-15/12/22
	- Bifenthrin	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Phenothrin	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Lambda-Cyhalothrin	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Cypermethrin	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Cyfluthrin	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Fenvalerate	µg/L		Not Detected	Not Detected	can not found	13-15/12/22

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

\*\*\* Subcontractor "Not TISI Accredited"

: W3 = น้ำเสียรวมเข้า Wet Well ของระบบบำบัดน้ำเสียแบบแผ่นจานหมุนชีวภาพ (RBC) ในเขตอุตสาหกรรมส่งออก (พื้นที่โครงการ ระยะที่ 1) (47P 0680521 UTM 1498087)  
W5 = น้ำเสียก่อนเข้า Automatic Screening ของระบบ Extended Activated Sludge ของพื้นที่โครงการระยะที่ 2 (47P 0679749 UTM 1499564)

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

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ชงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุมิศักดิ์

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

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

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## TEST REPORT

**Analysis No.** : R22-1897

**Customer** : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact** : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

**Sample Conditions** : 2207-WW0130 = yellow turbid/slight black sediment,

Flow Rate = 1,664 m<sup>3</sup>/Day, Odor = no smell, 2206-WW0132 = green turbid/slight black sediment,

Flow Rate = 2,836 m<sup>3</sup>/Day, Odor = no smell

**Report Date** : 13/07/22

**Received Date** : 07/07/22

**Analysis Date** : 07-12/07/22

**Sampling Date \*** : 06/07/22

**Sampling By \*** : TET

**Type of Sample** : Wastewater

**Job No.** : S650347/July

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard
				2207-WW0130	2207-WW0132	
				W4	W6	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.3	31.7	40
2	pH *	-	Electrometric Method (SM 4500 B)	7.77	7.86	5.5-9.0
3	Color (Original pH) *	ADMI	} ADMI Weighted-Ordinate	31	18	300
	Color (pH 7) *	ADMI		29	16	300
4	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	7.5 *	23.3	50
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	1,105	1,460	3,000
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	4	6	20
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	40	54	120
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	0.8	5
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	2.27	4.55	100
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	0.80	2.39	-
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	4.37	9.69	-
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	< 0.001	0.2
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	1
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	< 0.01	1
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	< 0.01	1
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	< 0.01	1
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	< 0.02	0.04	0.75
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	< 0.02	0.25
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.005
20	As *	mg/L	} Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0014	0.0016	0.25
21	Se *	mg/L		< 0.0005	< 0.0005	0.02
22	Ba	mg/L	} Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> edition, 2017, part 3030 F and part 3120 B	0.05	< 0.05	1.0
23	Cd	mg/L		< 0.02	< 0.02	0.03
24	Cu	mg/L		0.10	0.33	2.0
25	Mn	mg/L		0.20	0.33	5.0
26	Ni	mg/L		< 0.02	0.05	1.0
27	Pb	mg/L		< 0.04	< 0.04	0.2
28	Zn	mg/L		0.07	0.46	5.0

continue

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## TEST REPORT

**Analysis No.** : R22-1897

**Customer** : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact** : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

**Report Date** : 13/07/22

**Received Date** : 07/07/22

**Analysis Date** : 07-20/07/22

**Sampling Date \*** : 06/07/22

**Sampling By \*** : TET

**Type of Sample** : Wastewater

**Job No.** : S650347/July

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard
				2207-WW0130	2207-WW0132	
				W4	W6	
29	Organochlorine *			Not Detected	Not Detected	
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	Not Detected	can not found
	- Beta-BHC	µg/L		Not Detected	Not Detected	can not found
	- Gamma-BHC (Lindane)	µg/L		Not Detected	Not Detected	can not found
	- Heptachlor	µg/L		Not Detected	Not Detected	can not found
	- Aldrin	µg/L		Not Detected	Not Detected	can not found
	- Dicofol	µg/L		Not Detected	Not Detected	can not found
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	Not Detected	can not found
	- Heptachlor-endo-epoxide (tran-isomer A)	µg/L		Not Detected	Not Detected	can not found
	- Gamma-Chlordane	µg/L		Not Detected	Not Detected	can not found
	- o,p'-DDE	µg/L		Not Detected	Not Detected	can not found
	- Alpha Endosulfan	µg/L		Not Detected	Not Detected	can not found
	- Alpha-Chlordane	µg/L		Not Detected	Not Detected	can not found
	- Dieldrin	µg/L		Not Detected	Not Detected	can not found
	- p,p'-DDE	µg/L		Not Detected	Not Detected	can not found
	- o,p'-DDD	µg/L		Not Detected	Not Detected	can not found
	- Endrin	µg/L		Not Detected	Not Detected	can not found
	- Beta Endosulfan	µg/L		Not Detected	Not Detected	can not found
	- p,p'-DDD	µg/L		Not Detected	Not Detected	can not found
	- o,p'-DDT	µg/L		Not Detected	Not Detected	can not found
	- p,p'-DDT	µg/L		Not Detected	Not Detected	can not found
	- Endosulfan sulfate	µg/L		Not Detected	Not Detected	can not found
30	Carbamate ***					
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	Not Detected	can not found
	- Isoprocab	µg/L		Not Detected	Not Detected	can not found
	- Fenobucarb	µg/L		Not Detected	Not Detected	can not found
	- Promecarb	µg/L		Not Detected	Not Detected	can not found
	- Carbofuran	µg/L		Not Detected	Not Detected	can not found
	- Methiocarb	µg/L		Not Detected	Not Detected	can not found
	- Methomyl	µg/L		Not Detected	Not Detected	can not found
	- Aldicarb	µg/L		Not Detected	Not Detected	can not found
	- Oxamyl	µg/L		Not Detected	Not Detected	can not found
	- Metolcarb	µg/L		Not Detected	Not Detected	can not found
31	Organophosphate *					
	- Dichlorvos (DDVP)	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by GC/FPD Technique.	Not Detected	Not Detected	can not found
	- Mevinphos	µg/L		Not Detected	Not Detected	can not found
	- Diazinon	µg/L		Not Detected	Not Detected	can not found
	- Dicrotophos	µg/L		Not Detected	Not Detected	can not found
	- Monocrotophos	µg/L		Not Detected	Not Detected	can not found
	- Dimethoate	µg/L		Not Detected	Not Detected	can not found

continue

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## TEST REPORT

**Analysis No. :** R22-1897

**Customer :** Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address :** 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact :** Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Report Date :** 13/07/22

**Received Date :** 07/07/22

**Analysis Date :** 07-20/07/22

**Sampling Date \* :** 06/07/22

**Sampling By \* :** TET

**Type of Sample :** Wastewater

**Job No. :** S650347/July

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard
				2207-WW0130	2207-WW0132	
				W4	W6	
32	- Pirimiphos-methyl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by GC/FPD Technique.	Not Detected	Not Detected	can not found
	- Chlorpyrifos	µg/L		Not Detected	Not Detected	can not found
	- Parathion-methyl	µg/L		Not Detected	Not Detected	can not found
	- Pirimiphos	µg/L		Not Detected	Not Detected	can not found
	- Malathion	µg/L		Not Detected	Not Detected	can not found
	- Fenitrothion	µg/L		Not Detected	Not Detected	can not found
	- Parathion	µg/L		Not Detected	Not Detected	can not found
	- Prothiofos	µg/L		Not Detected	Not Detected	can not found
	- Methidathion	µg/L		Not Detected	Not Detected	can not found
	- Profenofos	µg/L		Not Detected	Not Detected	can not found
	- Ethion	µg/L		Not Detected	Not Detected	can not found
	- Triazophos	µg/L		Not Detected	Not Detected	can not found
	- EPN	µg/L		Not Detected	Not Detected	can not found
	- Phosalone	µg/L		Not Detected	Not Detected	can not found
	- Azinphos-ethyl	µg/L		Not Detected	Not Detected	can not found
	Pyrethroid *					
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	Not Detected	can not found
	- Bifenthrin	µg/L		Not Detected	Not Detected	can not found
	- Phenothrin	µg/L		Not Detected	Not Detected	can not found
	- Lambda-Cyhalothrin	µg/L		Not Detected	Not Detected	can not found
	- Cypermethrin	µg/L		Not Detected	Not Detected	can not found
	- Cyfluthrin	µg/L		Not Detected	Not Detected	can not found
	- Fenvalerate	µg/L		Not Detected	Not Detected	can not found

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

\*\*\* Subcontractor "Not TISI Accredited"

: W4 = น้ำเสียที่ออกจากถังตกตะกอนของระบบ RBC ในเขตอุตสาหกรรม (พื้นที่โครงการ ระยะที่ 1) ก่อนระบายลงคลองสตัก (47P 0680596 UTM 1497947)  
W6 = น้ำทิ้งที่ออกจากระบบฆ่าเชื้อโรค (ก่อนระบายผ่านระบบเส้นท่อลงทะเล) ของระบบ Extended Activated Sludge ของพื้นที่โครงการ ระยะที่ 2 (47P 0679768 UTM 1499630)

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

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 รชชช พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธิศักดิ์

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

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

Ms. Wareerut Prachumdaeng

Chief of Laboratory

13, 07, 22



Mrs. Pornpip Pethshee

Laboratory Manager

13, 07, 22

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## TEST REPORT

Analysis No. : R22-2233

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Sample Conditions : 2208-WW0306 = white turbid/slight black sediment,

Flow Rate = 1,680 m<sup>3</sup>/Day, Odor = no smell, 2208-WW0308 = yellow turbid/slight black sediment,

Flow Rate = 3,448 m<sup>3</sup>/Day, Odor = no smell

Report Date : 15/09/22

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. : S650347Aug

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard
				2208-WW0306	2208-WW0308	
				W4	W6	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.4	29.5	40
2	pH *	-	Electrometric Method (SM 4500 B)	7.51	7.34	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	35	24	300
	Color (pH 7) *	ADMI		29	26	300
4	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	10.3	27.1	50
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	717	710	3,000
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	4	3	20
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	40	38	120
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	0.8	5
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	1.95	2.98	100
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	< 0.10	2.18	-
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	7.59	3.36	-
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	0.002	0.2
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	1
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	< 0.01	1
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	< 0.01	1
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	< 0.01	1
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	< 0.02	< 0.02	0.75
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	< 0.02	0.25
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.005
20	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0021	0.0040	0.25
21	Se *	mg/L		< 0.0005	< 0.0005	0.02
22	Ba	mg/L		0.05	< 0.05	1.0
23	Cd	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> edition, 2017, part 3030 F and part 3120 B	< 0.02	< 0.02	0.03
24	Cu	mg/L		0.11	< 0.05	2.0
25	Mn	mg/L		0.34	0.25	5.0
26	Ni	mg/L		< 0.02	< 0.02	1.0
27	Pb	mg/L		< 0.04	< 0.04	0.2
28	Zn	mg/L		0.06	0.06	5.0

continue

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## TEST REPORT

Analysis No. : R22-2233

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 15/09/22

Received Date : 10/08/22

Analysis Date : 10-30/08/22

Sampling Date \* : 09/08/22

Sampling By \* : TET

Type of Sample : Wastewater

Job No. : S650347Aug

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard
				2208-WW0306	2208-WW0308	
				W4	W6	
29	Organochlorine *					
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	Not Detected	can not found
	- Beta-BHC	µg/L		Not Detected	Not Detected	can not found
	- Gamma-BHC (Lindane)	µg/L		Not Detected	Not Detected	can not found
	- Heptachlor	µg/L		Not Detected	Not Detected	can not found
	- Aldrin	µg/L		Not Detected	Not Detected	can not found
	- Dicolfol	µg/L		Not Detected	Not Detected	can not found
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	Not Detected	can not found
	- Heptachlor-endo-epoxide (trans-isomer A)	µg/L		Not Detected	Not Detected	can not found
	- Gamma-Chlordane	µg/L		Not Detected	Not Detected	can not found
	- o,p'-DDE	µg/L		Not Detected	Not Detected	can not found
	- Alpha Endosulfan	µg/L		Not Detected	Not Detected	can not found
	- Alpha-Chlordane	µg/L		Not Detected	Not Detected	can not found
	- Dieldrin	µg/L		Not Detected	Not Detected	can not found
	- p,p'-DDE	µg/L		Not Detected	Not Detected	can not found
	- o,p'-DDD	µg/L		Not Detected	Not Detected	can not found
	- Endrin	µg/L		Not Detected	Not Detected	can not found
	- Beta Endosulfan	µg/L		Not Detected	Not Detected	can not found
	- p,p'-DDD	µg/L		Not Detected	Not Detected	can not found
	- o,p'-DDT	µg/L		Not Detected	Not Detected	can not found
	- p,p'-DDT	µg/L		Not Detected	Not Detected	can not found
	- Endosulfan sulfate	µg/L		Not Detected	Not Detected	can not found
30	Carbamate ***					
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	Not Detected	can not found
	- Isoprocarb	µg/L		Not Detected	Not Detected	can not found
	- Fenobucarb	µg/L		Not Detected	Not Detected	can not found
	- Promecarb	µg/L		Not Detected	Not Detected	can not found
	- Carbofuran	µg/L		Not Detected	Not Detected	can not found
	- Methiocarb	µg/L		Not Detected	Not Detected	can not found
	- Methomyl	µg/L		Not Detected	Not Detected	can not found
	- Aldicarb	µg/L		Not Detected	Not Detected	can not found
	- Oxamyl	µg/L		Not Detected	Not Detected	can not found
	- Metolcarb	µg/L		Not Detected	Not Detected	can not found
31	Organophosphate *					
	- Dichlorvos (DDVP)	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	can not found
	- Mevinphos	µg/L		Not Detected	Not Detected	can not found
	- Diazinon	µg/L		Not Detected	Not Detected	can not found
	- Dicrotophos	µg/L		Not Detected	Not Detected	can not found
	- Monocrotophos	µg/L		Not Detected	Not Detected	can not found
	- Dimethoate	µg/L		Not Detected	Not Detected	can not found

continue

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## TEST REPORT

**Analysis No.** : R22-2233  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact** : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Report Date** : 15/09/22  
**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.** : S650347Aug

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard
				2208-WW0306	2208-WW0308	
				W4	W6	
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	can not found
	- Chlorpyrifos	µg/L		Not Detected	Not Detected	can not found
	- Parathion-methyl	µg/L		Not Detected	Not Detected	can not found
	- Pirimiphos	µg/L		Not Detected	Not Detected	can not found
	- Malathion	µg/L		Not Detected	Not Detected	can not found
	- Fenitrothion	µg/L		Not Detected	Not Detected	can not found
	- Parathion	µg/L		Not Detected	Not Detected	can not found
	- Prothiofos	µg/L		Not Detected	Not Detected	can not found
	- Methidathion	µg/L		Not Detected	Not Detected	can not found
	- Profenofos	µg/L		Not Detected	Not Detected	can not found
	- Ethion	µg/L		Not Detected	Not Detected	can not found
	- Triazophos	µg/L		Not Detected	Not Detected	can not found
	- EPN	µg/L		Not Detected	Not Detected	can not found
	- Phosalone	µg/L		Not Detected	Not Detected	can not found
	- Azinphos-ethyl	µg/L		Not Detected	Not Detected	can not found
	Pyrethroid *					
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	Not Detected	can not found
	- Bifenthrin	µg/L		Not Detected	Not Detected	can not found
	- Phenothrin	µg/L		Not Detected	Not Detected	can not found
	- Lambda-Cyhalothrin	µg/L		Not Detected	Not Detected	can not found
	- Cypermethrin	µg/L		Not Detected	Not Detected	can not found
	- Cyfluthrin	µg/L		Not Detected	Not Detected	can not found
	- Fenvalerate	µg/L		Not Detected	Not Detected	can not found

**Remarks** : \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"  
\*\*\* Subcontractor "Not TISI Accredited"  
: W4 = น้ำเสียที่ออกจากถังตกตะกอนของระบบ RBC ในเขตอุตสาหกรรม (พื้นที่โครงการ ระยะที่ 1) ก่อนระบายลงคลองสลัด (47P 0680593 UTM 1497953)  
W6 = น้ำทิ้งที่ออกจากระบบฆ่าเชื้อโรค (ก่อนระบายผ่านระบบเส้นท่อลงทะเล) ของระบบ Extended Activated Sludge ของพื้นที่โครงการ ระยะที่ 2 (47P 0679759 UTM 1499624)  
**Method** (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุมพิศักดิ์  
(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD: SW-846 Manual  
**Standard** : Notification of the Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Mrs. Wareerut Prachumdaeng

Chief of Laboratory

15.09.22



Mrs. Porntip Pethshee

Laboratory Manager

15.09.22

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## TEST REPORT

**Analysis No. :** R22-2508  
**Customer :** Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address :** 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact :** Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730  
**Sample Conditions :** 2209-WW0152 = light yellow/slight black sediment,  
Flow Rate = 2,280 m<sup>3</sup>/Day, Odor = no smell

**Report Date :** 13/09/22  
**Received Date :** 06/09/22  
**Analysis Date :** 06-12/09/22  
**Sampling Date \* :** 05/09/22  
**Sampling By \* :** TET  
**Type of Sample :** Wastewater  
**Job No. :** S650347/Sep

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2209-WW0152	
				W4	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	29.7	40
2	pH *	-	Electrometric Method (SM 4500 B)	7.93	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	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	4.0	50
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	558	3,000
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	3	20
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	31	120
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.5	5
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	1.69	100
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	0.24	-
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	4.38	-
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	0.2
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	1
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	1
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	1
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	1
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	< 0.02	0.75
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	0.25
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
20	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0012	0.25
21	Se *	mg/L		< 0.0005	0.02
22	Ba	mg/L		< 0.05	1.0
23	Cd	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> edition, 2017, part 3030 F and part 3120 B	< 0.02	0.03
24	Cu	mg/L		0.06	2.0
25	Mn	mg/L		0.12	5.0
26	Ni	mg/L		< 0.02	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		0.04	5.0

continue

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## TEST REPORT

Analysis No. : R22-2508

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 13/09/22

Received Date : 06/09/22

Analysis Date : 06-19/09/22

Sampling Date \* : 05/09/22

Sampling By \* : TET

Type of Sample : Wastewater

Job No. : S650347/Sep

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2209-WW0152	
				W4	
29	Organochlorine *				
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	can not found
	- Beta-BHC	µg/L		Not Detected	can not found
	- Gamma-BHC (Lindane)	µg/L		Not Detected	can not found
	- Heptachlor	µg/L		Not Detected	can not found
	- Aldrin	µg/L		Not Detected	can not found
	- Dicofol	µg/L		Not Detected	can not found
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	can not found
	- Heptachlor-endo-epoxide (tran-isomer A)	µg/L		Not Detected	can not found
	- Gamma-Chlordane	µg/L		Not Detected	can not found
	- o,p'-DDE	µg/L		Not Detected	can not found
	- Alpha Endosulfan	µg/L		Not Detected	can not found
	- Alpha-Chlordane	µg/L		Not Detected	can not found
	- Dieldrin	µg/L		Not Detected	can not found
	- p,p'-DDE	µg/L		Not Detected	can not found
	- o,p'-DDD	µg/L		Not Detected	can not found
	- Endrin	µg/L		Not Detected	can not found
	- Beta Endosulfan	µg/L		Not Detected	can not found
	- p,p'-DDD	µg/L		Not Detected	can not found
	- o,p'-DDT	µg/L		Not Detected	can not found
	- p,p'-DDT	µg/L		Not Detected	can not found
	- Endosulfan sulfate	µg/L		Not Detected	can not found
30	Carbamate ***				
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	can not found
	- Isoprocarb	µg/L		Not Detected	can not found
	- Fenobucarb	µg/L		Not Detected	can not found
	- Promecarb	µg/L		Not Detected	can not found
	- Carbofuran	µg/L		Not Detected	can not found
	- Methiocarb	µg/L		Not Detected	can not found
	- Methomyl	µg/L		Not Detected	can not found
	- Aldicarb	µg/L		Not Detected	can not found
	- Oxamyl	µg/L		Not Detected	can not found
	- Metolcarb	µg/L		Not Detected	can not found
31	Organophosphate *				
	- Dichlorvos (DDVP)	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>[C]</sup>	Not Detected	can not found
	- Mevinphos	µg/L		Not Detected	can not found
	- Diazinon	µg/L		Not Detected	can not found
	- Dicrotophos	µg/L		Not Detected	can not found
	- Monocrotophos	µg/L		Not Detected	can not found
	- Dimethoate	µg/L		Not Detected	can not found

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

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## TEST REPORT

**Analysis No. :** R22-2508  
**Customer :** Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address :** 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact :** Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Report Date :** 13/09/22  
**Received Date :** 06/09/22  
**Analysis Date :** 06-12/09/22  
**Sampling Date \* :** 05/09/22  
**Sampling By \* :** TET  
**Type of Sample :** Wastewater  
**Job No. :** S650347/Sep

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2209-WW0152	
				W4	
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	can not found
	- Chlorpyrifos	µg/L		Not Detected	can not found
	- Parathion-methyl	µg/L		Not Detected	can not found
	- Pirimiphos	µg/L		Not Detected	can not found
	- Malathion	µg/L		Not Detected	can not found
	- Fenitrothion	µg/L		Not Detected	can not found
	- Parathion	µg/L		Not Detected	can not found
	- Prothiofos	µg/L		Not Detected	can not found
	- Methidathion	µg/L		Not Detected	can not found
	- Profenofos	µg/L		Not Detected	can not found
	- Ethion	µg/L		Not Detected	can not found
	- Triazophos	µg/L		Not Detected	can not found
	- EPN	µg/L		Not Detected	can not found
	- Phosalone	µg/L		Not Detected	can not found
	- Azinphos-ethyl	µg/L		Not Detected	can not found
	Pyrethroid *				
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	can not found
	- Bifenthrin	µg/L		Not Detected	can not found
	- Phenothrin	µg/L		Not Detected	can not found
	- Lambda-Cyhalothrin	µg/L		Not Detected	can not found
	- Cypermethrin	µg/L		Not Detected	can not found
	- Cyfluthrin	µg/L		Not Detected	can not found
	- Fenvalerate	µg/L		Not Detected	can not found

**Remarks** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"  
\*\*\* Subcontractor "Not TISI Accredited"  
: W4 = น้ำเสียที่ออกจากถังตกตะกอนของระบบ RBC ในเขตอุตสาหกรรม (พื้นที่โครงการ ระยะที่ 1) ก่อนระบายลงคลองสลัด (47P 0680511 UTM 1498030)  
**Method** (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรรณสวัสดิ์, วิบูลย์ลักษณ์ วิทูรธิดิกดิ์  
(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD: SW: 846 Manual  
**Standard** : Notification of the 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

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## TEST REPORT

**Analysis No.** : R22-2625

**Customer** : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact** : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

**Sample Conditions** : 2209-WW0432 = yellow turbid/high black sediment/foul smell,

Flow Rate = 3,490 m<sup>3</sup>/Day, Odor = smell

**Report Date** : 04/10/22

**Received Date** : 15/09/22

**Analysis Date** : 15-20/09/22

**Sampling Date \*** : 14/09/22

**Sampling By \*** : TET

**Type of Sample** : Wastewater

**Job No.** : S650347/Sep/1

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	
				2209-WW0432	Standard
				W6	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.2	40
2	pH *	-	Electrometric Method (SM 4500 B)	7.58	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	16	300
	Color (pH 7) *	ADMI		13	300
4	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	14.1	50
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	1,018	3,000
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	2	20
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	21	120
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	5
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	1.69	100
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	0.42	-
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	3.54	-
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	0.002	0.2
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	1
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	1
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	1
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	1
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	0.04	0.75
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	0.25
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
20	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0014	0.25
21	Se *	mg/L		< 0.0005	0.02
22	Ba	mg/L		< 0.05	1.0
23	Cd	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> edition, 2017, part 3030 F and part 3120 B	< 0.02	0.03
24	Cu	mg/L		0.37	2.0
25	Mn	mg/L		0.14	5.0
26	Ni	mg/L		0.10	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		0.44	5.0

continue

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## TEST REPORT

Analysis No. : R22-2625

Report Date : 04/10/22

Customer : Technical Division of Thai Environmental Technic Limited

Received Date : 15/09/22

For นิคมอุตสาหกรรมบางปู

Analysis Date : 15-30/09/22

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

Sampling Date \* : 14/09/22

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Sampling By \* : TET

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Type of Sample : Wastewater

Job No. : S650347/Sep/1

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2209-WW0432	
				W6	
29	Organochlorine *				
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	can not found
	- Beta-BHC	µg/L		Not Detected	can not found
	- Gamma-BHC (Lindane)	µg/L		Not Detected	can not found
	- Heptachlor	µg/L		Not Detected	can not found
	- Aldrin	µg/L		Not Detected	can not found
	- Dicofof	µg/L		Not Detected	can not found
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	can not found
	- Heptachlor-endo-epoxide (trans-isomer A)	µg/L		Not Detected	can not found
	- Gamma-Chlordane	µg/L		Not Detected	can not found
	- o,p'-DDE	µg/L		Not Detected	can not found
	- Alpha Endosulfan	µg/L		Not Detected	can not found
	- Alpha-Chlordane	µg/L		Not Detected	can not found
	- Dieldrin	µg/L		Not Detected	can not found
	- p,p'-DDE	µg/L		Not Detected	can not found
	- o,p'-DDD	µg/L		Not Detected	can not found
	- Endrin	µg/L		Not Detected	can not found
	- Beta Endosulfan	µg/L		Not Detected	can not found
	- p,p'-DDD	µg/L		Not Detected	can not found
	- o,p'-DDT	µg/L		Not Detected	can not found
	- p,p'-DDT	µg/L		Not Detected	can not found
	- Endosulfan sulfate	µg/L		Not Detected	can not found
30	Carbamate ***				
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	can not found
	- Isoprocarb	µg/L		Not Detected	can not found
	- Fenobucarb	µg/L		Not Detected	can not found
	- Promecarb	µg/L		Not Detected	can not found
	- Carbofuran	µg/L		Not Detected	can not found
	- Methiocarb	µg/L		Not Detected	can not found
	- Methomyl	µg/L		Not Detected	can not found
	- Aldicarb	µg/L		Not Detected	can not found
	- Oxamyl	µg/L		Not Detected	can not found
	- Metolcarb	µg/L		Not Detected	can not found
31	Organophosphate *				
	- Dichlorvos (DDVP)	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	can not found
	- Mevinphos	µg/L		Not Detected	can not found
	- Diazinon	µg/L		Not Detected	can not found
	- Dicrotophos	µg/L		Not Detected	can not found
	- Monocrotophos	µg/L		Not Detected	can not found
	- Dimethoate	µg/L		Not Detected	can not found

continue

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## TEST REPORT

**Analysis No. :** R22-2625  
**Customer :** Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address :** 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact :** Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Report Date :** 04/10/22  
**Received Date :** 15/09/22  
**Analysis Date :** 15-20/09/22  
**Sampling Date \* :** 14/09/22  
**Sampling By \* :** TET  
**Type of Sample :** Wastewater  
**Job No. :** S650347/Sep/1

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2209-WW0432	
				W6	
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	can not found
	- Chlorpyrifos	µg/L		Not Detected	can not found
	- Parathion-methyl	µg/L		Not Detected	can not found
	- Pirimiphos	µg/L		Not Detected	can not found
	- Malathion	µg/L		Not Detected	can not found
	- Fenitrothion	µg/L		Not Detected	can not found
	- Parathion	µg/L		Not Detected	can not found
	- Prothiofos	µg/L		Not Detected	can not found
	- Methidathion	µg/L		Not Detected	can not found
	- Profenofos	µg/L		Not Detected	can not found
	- Ethion	µg/L		Not Detected	can not found
	- Triazophos	µg/L		Not Detected	can not found
	- EPN	µg/L		Not Detected	can not found
	- Phosalone	µg/L		Not Detected	can not found
	- Azinphos-ethyl	µg/L		Not Detected	can not found
	Pyrethroid *				
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	can not found
	- Bifenthrin	µg/L		Not Detected	can not found
	- Phenothrin	µg/L		Not Detected	can not found
	- Lambda-Cyhalothrin	µg/L		Not Detected	can not found
	- Cypermethrin	µg/L		Not Detected	can not found
	- Cyfluthrin	µg/L		Not Detected	can not found
	- Fenvalerate	µg/L		Not Detected	can not found

**Remarks** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"  
\*\*\* Subcontractor "Not TISI Accredited"  
: W6 = น้ำทิ้งที่ออกจากระบบฆ่าเชื้อโรค (ก่อนระบายผ่านระบบเส้นท่อลงทะเล) ของระบบ Extended Activated Sludge ของพื้นที่โครงการ ระยะที่ 2 (47P 0679778 UTM 1499895)  
**Method** (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิสุทธีศักดิ์  
(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD: SW: 846 Manual  
**Standard** : Notification of the Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

04/10/22



Mrs. Pornpip Pethshee

Laboratory Manager

04/10/22

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



## TEST REPORT

Analysis No. : R22-2882

Received Date: 11/10/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 18/10/22

Analysis Date : 10-17/10/22

Job No. : S650347/Oct

Sampling Date \* : 10/10/22

Sampling By \* : TET

Type of Sample : Wastewater

Sample Conditions : 2210-WW0297 = yellow turbid/high black sediment, Flow Rate = 1,716 m<sup>3</sup>/Day, Odor = no smell

2210-WW0299 = yellow turbid/high yellow sediment, Flow Rate = 3,678 m<sup>3</sup>/Day, Odor = no smell

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2210-WW0297	2210-WW0299		
				W4	W6		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	29.4	29.7	40	10/10/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.51	7.35	5.5-9.0	10/10/22
3	Color (Original pH) *	ADMI	} ADMI Weighted-Ordinate	30	28	300	12/10/22
	Color (pH 7) *	ADMI		27	14	300	12/10/22
4	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	10.6	27.5	50	14/10/22
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	913	800	3,000	14/10/22
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	5	3	20	12-17/10/22
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	62	40	120	12/10/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	1.0	0.9	5	17/10/22
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method	2.17	1.32	100	14/10/22
			(SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)				
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	0.60	0.30	-	14/10/22
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	2.87	3.89	-	12, 14/10/22
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	0.005	0.005	0.2	17/10/22
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	1	14/10/22
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method	< 0.01	< 0.01	1	11/10/22
			(SM 4500-S <sup>2-</sup> D)				
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	< 0.01	1	14/10/22
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	< 0.01	1	11/10/22
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ;	< 0.02	0.10	0.75	14/10/22
			Filtration, Colorimetric Method (SM 3500-Cr B); Calculation				
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	< 0.02	0.25	11/10/22
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.005	12/10/22
20	As *	mg/L	} Digestion, Continuous Hydride generation/AAS Method	0.0012	0.0017	0.25	14/10/22
21	Se *	mg/L		< 0.0005	< 0.0005	0.02	17/10/22
			(SM 3114C)				
22	Ba	mg/L	} Standard Methods for the Examination of	< 0.05	0.05	1.0	14/10/22
23	Cd	mg/L		< 0.02	< 0.02	0.03	14/10/22
24	Cu	mg/L		0.09	0.61	2.0	14/10/22
25	Mn	mg/L		0.25	0.13	5.0	14/10/22
26	Ni	mg/L		< 0.02	0.08	1.0	14/10/22
27	Pb	mg/L		< 0.04	< 0.04	0.2	14/10/22
28	Zn	mg/L		0.07	0.58	5.0	14/10/22

continue

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## TEST REPORT

Analysis No. : R22-2882

Received Date: 11/10/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 18/10/22

Analysis Date : 10-28/10/22

Job No. : S650347/Oct

Sampling Date \* : 10/10/22

Sampling By \* : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2210-WW0297	2210-WW0299		
				W4	W6		
29	Organochlorine *						
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	Not Detected	can not found	11-14/10/22
	- Beta-BHC	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Gamma-BHC (Lindane)	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Heptachlor	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Aldrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Dicofof	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Heptachlor-endo-epoxide (trans-isomer A)	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Gamma-Chlordane	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- o,p'-DDE	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Alpha Endosulfan	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Alpha-Chlordane	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Dieldrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- p,p'-DDE	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- o,p'-DDD	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Endrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Beta Endosulfan	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- p,p'-DDD	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- o,p'-DDT	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- p,p'-DDT	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Endosulfan sulfate	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
30	Carbamate ***						
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	Not Detected	can not found	19-28/10/22
	- Isoproc carb	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
	- Fenobucarb	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
	- Promecarb	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
	- Carbofuran	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
	- Methiocarb	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
	- Methomyl	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
	- Aldicarb	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
	- Oxamyl	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
	- Metolcarb	µg/L		Not Detected	Not Detected	can not found	19-28/10/22
31	Organophosphate *						
	- Dichlorvos (DDVP)	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	can not found	11-18/10/22
	- Mevinphos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Diazinon	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Dicrotophos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Monocrotophos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Dimethoate	µg/L		Not Detected	Not Detected	can not found	11-18/10/22

continue

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## TEST REPORT

Analysis No. : R22-2882

Received Date: 11/10/22

Customer : Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

Report Date : 18/10/22

Analysis Date : 10-18/10/22

Job No. : S650347/Oct

Sampling Date \* : 10/10/22

Sampling By \* : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2210-WW0297	2210-WW0299		
				W4	W6		
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	can not found	11-18/10/22
	- Chlorpyrifos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Parathion-methyl	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Pirimiphos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Malathion	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Fenitrothion	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Parathion	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Prothiofos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Methidathion	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Profenofos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Ethion	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Triazophos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- EPN	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Phosalone	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Azinphos-ethyl	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	Pyrethroid *						
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	Not Detected	can not found	11-14/10/22
	- Bifenthrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Phenothrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Lambda-Cyhalothrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Cypermethrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Cyfluthrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Fenvalerate	µg/L		Not Detected	Not Detected	can not found	11-14/10/22

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

\*\*\* Subcontractor "Not TISI Accredited"

: W4 = น้ำเสียที่ออกจากถังตกตะกอนของระบบ RBC ในเขตอุตสาหกรรม (พื้นที่โครงการ ระยะที่ 1) ก่อนระบายลงคลองสตัก (47P 0680511 UTM 1498026)  
W6 = น้ำทิ้งที่ออกจากระบบฆ่าเชื้อโรค (ก่อนระบายผ่านระบบเส้นท่อลงทะเล) ของระบบ Extended Activated Sludge ของพื้นที่โครงการ ระยะที่ 2 (47P 0679771 UTM 1499599)

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> 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 the Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

18/10/22



Mrs. Pornpip Pethshee

Laboratory Manager

18/10/22

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





## TEST REPORT

Analysis No. : R22-3306

Received Date: 21/11/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 29/11/22

Analysis Date : 18-28/11/22

Job No. : S650347/Nov

Sampling Date \* : 18/11/22

Sampling By \* : TET

Type of Sample : Wastewater

Sample Conditions : 2211-WW0639 = yellow turbid/slight black sediment, Flow Rate = 1,688 m<sup>3</sup>/Day, Odor = no smell

2211-WW0641 = yellow turbid/slight white sediment, Flow Rate = 3,352 m<sup>3</sup>/Day, Odor = no smell

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2211-WW0639	2211-WW0641		
				W4	W6		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.0	30.5	40	18/11/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.61	7.35	5.5-9.0	18/11/22
3	Color (Original pH) *	ADMI	} ADMI Weighted-Ordinate	34	42	300	25/11/22
	Color (pH 7) *	ADMI		33	41	300	25/11/22
4	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	7.6 *	18.1	50	23/11/22
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	1,018	1,268	3,000	24/11/22
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	4	3	20	23-28/11/22
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	35	31	120	23/11/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	0.7	5	24/11/22
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	2.20	1.39	100	23/11/22
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	0.70	0.17	-	23/11/22
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	8.70	7.95	-	23/11/22
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	< 0.001	0.2	23/11/22
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	1	25/11/22
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	< 0.01	1	24/11/22
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	< 0.01	1	25/11/22
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	< 0.01	1	22/11/22
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	< 0.02	0.06	0.75	25/11/22
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	0.04	0.25	22/11/22
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.005	24/11/22
20	As *	mg/L	} Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0012	0.0023	0.25	23/11/22
21	Se *	mg/L		< 0.0005	< 0.0005	0.02	23/11/22
22	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.05	0.05	1.0	25/11/22
23	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	< 0.02	0.03	28/11/22
24	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.10	0.46	2.0	25/11/22
25	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.24	0.12	5.0	25/11/22
26	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.06	1.0	25/11/22
27	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	< 0.04	0.2	28/11/22
28	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.10	0.39	5.0	25/11/22

continue

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## TEST REPORT

**Analysis No. :** R22-3306

**Received Date:** 21/11/22

**Customer :** Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address :** 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact :** Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

**Report Date :** 29/11/22

**Analysis Date :** 18-29/11/22

**Job No. :** S650347/Nov

**Sampling Date \* :** 18/11/22

**Sampling By \* :** TET

**Type of Sample :** Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2211-WW0639	2211-WW0641		
				W4	W6		
29	Organochlorine *						
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	Not Detected	can not found	21-25/11/22
	- Beta-BHC	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Gamma-BHC (Lindane)	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Heptachlor	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Aldrin	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Dicofol	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Heptachlor-endo-epoxide (trans-isomer A)	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Gamma-Chlordane	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- o,p'-DDE	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Alpha Endosulfan	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Alpha-Chlordane	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Dieldrin	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- p,p'-DDE	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- o,p'-DDD	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Endrin	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Beta Endosulfan	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- p,p'-DDD	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- o,p'-DDT	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- p,p'-DDT	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Endosulfan sulfate	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
30	Carbamate ***						
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	Not Detected	can not found	22-29/11/22
	- Isoprocab	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
	- Fenobucarb	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
	- Promecarb	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
	- Carbofuran	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
	- Methiocarb	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
	- Methomyl	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
	- Aldicarb	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
	- Oxamyl	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
	- Metolcarb	µg/L		Not Detected	Not Detected	can not found	22-29/11/22
31	Organophosphate *						
	- Dichlorvos (DDVP)	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	can not found	21-25/11/22
	- Mevinphos	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Diazinon	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Dicrotophos	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Monocrotophos	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Dimethoate	µg/L		Not Detected	Not Detected	can not found	21-25/11/22

continue

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## TEST REPORT

Analysis No. : R22-3306

Report Date : 29/11/22

Received Date: 21/11/22

Analysis Date : 18-28/11/22

Customer : Technical Division of Thai Environmental Technic Limited

Job No. : S650347/Nov

For นิคมอุตสาหกรรมบางปู

Sampling Date \* : 18/11/22

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

Sampling By \* : TET

Type of Sample : Wastewater

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2211-WW0639	2211-WW0641		
				W4	W6		
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	can not found	21-25/11/22
	- Chlorpyrifos	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Parathion-methyl	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Pirimiphos	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Malathion	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Fenitrothion	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Parathion	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Prothiofos	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Methidathion	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Profenofos	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Ethion	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Triazophos	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- EPN	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Phosalone	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Azinphos-ethyl	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	Pyrethroid *						
	- Deltamethrin	µg/L	LLE, GC/EC (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	Not Detected	can not found	21-25/11/22
	- Bifenthrin	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Phenothrin	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Lambda-Cyhalothrin	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Cypermethrin	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Cyfluthrin	µg/L		Not Detected	Not Detected	can not found	21-25/11/22
	- Fenvalerate	µg/L		Not Detected	Not Detected	can not found	21-25/11/22

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

\*\*\* Subcontractor "Not TISI Accredited"

W4 = น้ำเสียที่ออกจากถังตกตะกอนของระบบ RBC ในเขตอุตสาหกรรม (พื้นที่โครงการ ระยะที่ 1) ก่อนระบายลงคลองสลัด (47P 0680511 UTM 1498026)  
W6 = น้ำทิ้งที่ออกจากระบบฆ่าเชื้อโรค (ก่อนระบายผ่านระบบเส้นท่อลงทะเล) ของระบบ Extended Activated Sludge ของพื้นที่โครงการ ระยะที่ 2 (47P 0679771 UTM 1499589)

Method (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> 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 the Ministry of Natural Resources and Environment (2016) (B.E. 2559)

Reviewed by

Mrs. Wareerut Prachumdaeng  
Chief of Laboratory  
29 / 11 / 22



Approved by

Mrs. Pomtip Pethshee  
Laboratory Manager  
29 / 11 / 22

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## TEST REPORT

Analysis No. : R22-3559

Report Date : 28/12/22

Received Date: 12/12/22

Analysis Date : 09-19/12/22

Customer : Technical Division of Thai Environmental Technic Limited

Job No. : S650347/Dec

For นิคมอุตสาหกรรมบางปู

Sampling Date \* : 09/12/22

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

Sampling By \* : TET

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Type of Sample : Wastewater

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Sample Conditions : 2212-WW0349 = yellow turbid/high black sediment/covered with oil slick, Flow Rate = 1,725 m<sup>3</sup>/Day, Odor = no smell

2212-WW0351 = white turbid/high white sediment/covered with oil slick, Flow Rate = 3,175 m<sup>3</sup>/Day, Odor = no smell

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2212-WW0349	2212-WW0351		
				W4	W6		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	30.6	30.4	40	09/12/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.43	7.35	5.5-9.0	09/12/22
3	Color (Original pH) *	ADMI	} ADMI Weighted-Ordinate Spectrophotometric Method (SM 2120 F)	41	30	300	13/12/22
	Color (pH 7) *	ADMI		33	19	300	13/12/22
4	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	7.1 *	16.3	50	14/12/22
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	845	1,150	3,000	14/12/22
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	5	3	20	09-14/12/22
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	53	43	120	14/12/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	1.0	0.6	5	15/12/22
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	2.27	1.14	100	19/12/22
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	< 0.10	< 0.10	-	19/12/22
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	7.20	6.90	-	15/12/22
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	< 0.001	0.2	15/12/22
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	1	15/12/22
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	< 0.01	1	13/12/22
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	< 0.01	1	15/12/22
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	< 0.01	1	12/12/22
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	< 0.02	0.07 <sup>(1)</sup>	0.75	14/12/22, 15/12/22 <sup>(1)</sup>
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	< 0.02	0.25	14/12/22
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	< 0.0005	0.005	16/12/22
20	As *	mg/L	} Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0005	0.0018	0.25	15/12/22
21	Se *	mg/L		< 0.0005	< 0.0005	0.02	15/12/22
22	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	< 0.05 <sup>(1)</sup>	1.0	14/12/22, 15/12/22 <sup>(1)</sup>
23	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	< 0.02 <sup>(1)</sup>	0.03	14/12/22, 15/12/22 <sup>(1)</sup>
24	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.07	0.44 <sup>(1)</sup>	2.0	14/12/22, 15/12/22 <sup>(1)</sup>
25	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.29	0.15 <sup>(1)</sup>	5.0	14/12/22, 15/12/22 <sup>(1)</sup>
26	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.08 <sup>(1)</sup>	1.0	14/12/22, 15/12/22 <sup>(1)</sup>
27	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	< 0.04 <sup>(1)</sup>	0.2	14/12/22, 15/12/22 <sup>(1)</sup>
28	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.04	0.81 <sup>(1)</sup>	5.0	14/12/22, 15/12/22 <sup>(1)</sup>

continue

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## TEST REPORT

Analysis No. : R22-3559

Received Date: 12/12/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 28/12/22

Analysis Date : 09-23/12/22

Job No. : S650347/Dec

Sampling Date \* : 09/12/22

Sampling By \* : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2212-WW0349	2212-WW0351		
				W4	W6		
29	Organochlorine *						
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	Not Detected	can not found	13-15/12/22
	- Beta-BHC	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Gamma-BHC (Lindane)	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Heptachlor	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Aldrin	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Dicofol	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Heptachlor-endo-epoxide (tran-isomer A)	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Gamma-Chlordane	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- o,p'-DDE	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Alpha Endosulfan	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Alpha-Chlordane	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Dieldrin	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- p,p'-DDE	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- o,p'-DDD	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Endrin	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Beta Endosulfan	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- p,p'-DDD	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- o,p'-DDT	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- p,p'-DDT	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Endosulfan sulfate	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
30	Carbamate ***						
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	Not Detected	can not found	15-23/12/22
	- Isoprocab	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
	- Fenobucarb	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
	- Promecarb	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
	- Carbofuran	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
	- Methiocarb	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
	- Methomyl	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
	- Aldicarb	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
	- Oxamyl	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
	- Metolcarb	µg/L		Not Detected	Not Detected	can not found	15-23/12/22
31	Organophosphate *						
	- Dichlorvos (DDVP)	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	can not found	13-15/12/22
	- Mevinphos	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Diazinon	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Dicrotophos	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Monocrotophos	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Dimethoate	µg/L		Not Detected	Not Detected	can not found	13-15/12/22

continue

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## TEST REPORT

Analysis No. : R22-3559

Received Date: 12/12/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 28/12/22

Analysis Date : 09-19/12/22

Job No. : S650347/Dec

Sampling Date \* : 09/12/22

Sampling By \* : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2212-WW0349	2212-WW0351		
				W4	W6		
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	can not found	13-15/12/22
	- Chlorpyrifos	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Parathion-methyl	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Pirimiphos	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Malathion	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Fenitrothion	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Parathion	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Prothiofos	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Methidathion	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Profenofos	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Ethion	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Triazophos	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- EPN	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Phosalone	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Azinphos-ethyl	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	Pyrethroid *						
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	Not Detected	can not found	13-15/12/22
	- Bifenthrin	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Phenothrin	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Lambda-Cyhalothrin	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Cypermethrin	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Cyfluthrin	µg/L		Not Detected	Not Detected	can not found	13-15/12/22
	- Fenvalerate	µg/L		Not Detected	Not Detected	can not found	13-15/12/22

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

\*\*\* Subcontractor "Not TISI Accredited"

: W4 = น้ำเสียที่ออกจากถังตกตะกอนของระบบ RBC ในเขตอุตสาหกรรม (พื้นที่โครงการ ระยะที่ 1) ก่อนระบายลงคลองสลัด (47P 0680511 UTM 1498026)  
W6 = น้ำทิ้งที่ออกจากระบบฆ่าเชื้อโรค (ก่อนระบายผ่านระบบเส้นท่อลงทะเล) ของระบบ Extended Activated Sludge ของพื้นที่โครงการ ระยะที่ 2  
(47P 0679771 UTM 1499589)

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

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิทยาลัยเทคนิค วิศวกรรมศาสตร์

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

Standard : Notification of the 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

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

**Analysis No. :** R22-1897

**Customer :** Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address :** 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact :** Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

**Sample Conditions :** 2207-WW0133 = clear/slight black sediment,

Flow Rate = 27.0 m<sup>3</sup>/Day, Odor = no smell

**Report Date :** 13/07/22

**Received Date :** 07/07/22

**Analysis Date :** 07-12/07/22

**Sampling Date \* :** 06/07/22

**Sampling By \* :** TET

**Type of Sample :** Wastewater

**Job No. :** S650347/July

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2207-WW0133	
				W7	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	33.2	45
2	pH *	-	Electrometric Method (SM 4500 B)	8.05	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate	6	600
	Color (pH 7) *	ADMI	Spectrophotometric Method (SM 2120 F)	5	600
4	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	< 2.5	200
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	193	3,000
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	2	500
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	22	750
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	10
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	0.68	100
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	< 0.10	-
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	3.67	-
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	0.2
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	1
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	1
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	1
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	1
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	< 0.02	0.75
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	0.25
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
20	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	< 0.0005	0.25
21	Se *	mg/L		< 0.0005	0.02
22	Ba	mg/L		0.06	1.0
23	Cd	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> edition, 2017, part 3030 F and part 3120 B	< 0.02	0.03
24	Cu	mg/L		< 0.05	2.0
25	Mn	mg/L		< 0.02	5.0
26	Ni	mg/L		< 0.02	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		< 0.04	5.0

continue

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## TEST REPORT

**Analysis No. :** R22-1897

**Report Date :** 13/07/22

**Customer :** Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู

**Received Date :** 07/07/22

**Address :** 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Analysis Date :** 07-20/07/22

**Sampling Date \* :** 06/07/22

**Sampling By \* :** TET

**Contact :** Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

**Type of Sample :** Wastewater

**Job No. :** S650347/July

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2207-WW0133	
				W7	
29	Organochlorine *			Not Detected	
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	can not found
	- Beta-BHC	µg/L		Not Detected	can not found
	- Gamma-BHC (Lindane)	µg/L		Not Detected	can not found
	- Heptachlor	µg/L		Not Detected	can not found
	- Aldrin	µg/L		Not Detected	can not found
	- Dicofof	µg/L		Not Detected	can not found
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	can not found
	- Heptachlor-endo-epoxide (tran-isomer A)	µg/L		Not Detected	can not found
	- Gamma-Chlordane	µg/L		Not Detected	can not found
	- o,p'-DDE	µg/L		Not Detected	can not found
	- Alpha Endosulfan	µg/L		Not Detected	can not found
	- Alpha-Chlordane	µg/L		Not Detected	can not found
	- Dieldrin	µg/L		Not Detected	can not found
	- p,p'-DDE	µg/L		Not Detected	can not found
	- o,p'-DDD	µg/L		Not Detected	can not found
	- Endrin	µg/L		Not Detected	can not found
	- Beta Endosulfan	µg/L		Not Detected	can not found
	- p,p'-DDD	µg/L		Not Detected	can not found
	- o,p'-DDT	µg/L		Not Detected	can not found
	- p,p'-DDT	µg/L		Not Detected	can not found
	- Endosulfan sulfate	µg/L		Not Detected	can not found
30	Carbamate ***				
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	can not found
	- Isoproc carb	µg/L		Not Detected	can not found
	- Fenobucarb	µg/L		Not Detected	can not found
	- Promecarb	µg/L		Not Detected	can not found
	- Carbofuran	µg/L		Not Detected	can not found
	- Methiocarb	µg/L		Not Detected	can not found
	- Methomyl	µg/L		Not Detected	can not found
	- Aldicarb	µg/L		Not Detected	can not found
	- Oxamyl	µg/L		Not Detected	can not found
	- Metolcarb	µg/L		Not Detected	can not found
31	Organophosphate *				
	- Dichlorvos (DDVP)	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by GC/FPD Technique.	Not Detected	can not found
	- Mevinphos	µg/L		Not Detected	can not found
	- Diazinon	µg/L		Not Detected	can not found
	- Dicrotophos	µg/L		Not Detected	can not found
	- Monocrotophos	µg/L		Not Detected	can not found
	- Dimethoate	µg/L		Not Detected	can not found

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## TEST REPORT

Analysis No. : R22-1897

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 13/07/22

Received Date : 07/07/22

Analysis Date : 07-20/07/22

Sampling Date \* : 06/07/22

Sampling By \* : TET

Type of Sample : Wastewater

Job No. : S650347/July

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2207-WW0133	
				W7	
32	- Pirimiphos-methyl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by GC/FPD Technique.	Not Detected	can not found
	- Chlorpyrifos	µg/L		Not Detected	can not found
	- Parathion-methyl	µg/L		Not Detected	can not found
	- Pirimiphos	µg/L		Not Detected	can not found
	- Malathion	µg/L		Not Detected	can not found
	- Fenitrothion	µg/L		Not Detected	can not found
	- Parathion	µg/L		Not Detected	can not found
	- Prothiofos	µg/L		Not Detected	can not found
	- Methidathion	µg/L		Not Detected	can not found
	- Profenofos	µg/L		Not Detected	can not found
	- Ethion	µg/L		Not Detected	can not found
	- Triazophos	µg/L		Not Detected	can not found
	- EPN	µg/L		Not Detected	can not found
	- Phosalone	µg/L		Not Detected	can not found
	- Azinphos-ethyl	µg/L		Not Detected	can not found
	Pyrethroid *				
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	can not found
	- Bifenthrin	µg/L		Not Detected	can not found
	- Phenothrin	µg/L		Not Detected	can not found
	- Lambda-Cyhalothrin	µg/L		Not Detected	can not found
	- Cypermethrin	µg/L		Not Detected	can not found
	- Cyfluthrin	µg/L		Not Detected	can not found
	- Fenvalerate	µg/L		Not Detected	can not found

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

\*\*\* Subcontractor "Not TISI Accredited"

: W7 = บ่อพักน้ำเสียของโครงการเตาเผา Fluidized Bed ก่อนระบายลงสู่ท่อรวบรวมน้ำเสียของนิคมฯ บางปู (47P 0679147 UTM 1497155)

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

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ของ พรอสสวสดี, วิทยาลัยถาวร วิศวกรรมศาสตร์

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

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

Ms. Wareerut Prachumdaeng

Chief of Laboratory

13/07/22



Mrs. Pomtip Pethshee

Laboratory Manager

13/07/22

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## TEST REPORT

Analysis No. : R22-2233

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

Sample Conditions : 2208-WW0309 = clear/slight black sediment,

Flow Rate = 48.3 m<sup>3</sup>/Day, Odor = no smell

Report Date : 15/09/22

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. : S650347Aug

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2208-WW0309	
				W7	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	35.4	45
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)	37	600
	Color (pH 7) *	ADMI		35	600
4	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	< 2.5	200
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	766	3,000
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	2	500
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	34	750
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	10
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	4.94	100
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	< 0.10	-
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	1.07	-
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	0.2
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	1
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	1
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	1
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	1
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	< 0.02	0.75
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	0.25
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
20	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0014	0.25
21	Se *	mg/L		< 0.0005	0.02
22	Ba	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> edition, 2017, part 3030 F and part 3120 B	0.31	1.0
23	Cd	mg/L		< 0.02	0.03
24	Cu	mg/L		< 0.05	2.0
25	Mn	mg/L		< 0.02	5.0
26	Ni	mg/L		< 0.02	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		< 0.04	5.0

continue

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## TEST REPORT

**Analysis No.** : R22-2233  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact** : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Report Date** : 15/09/22  
**Received Date** : 10/08/22  
**Analysis Date** : 10-30/08/22  
**Sampling Date \*** : 09/08/22  
**Sampling By \*** : TET  
**Type of Sample** : Wastewater  
**Job No.** : S650347Aug

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	
				2208-WW0309	Standard
				W7	
29	Organochlorine *				
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	can not found
	- Beta-BHC	µg/L		Not Detected	can not found
	- Gamma-BHC (Lindane)	µg/L		Not Detected	can not found
	- Heptachlor	µg/L		Not Detected	can not found
	- Aldrin	µg/L		Not Detected	can not found
	- Dicofof	µg/L		Not Detected	can not found
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	can not found
	- Heptachlor-endo-epoxide (tran-isomer A)	µg/L		Not Detected	can not found
	- Gamma-Chlordane	µg/L		Not Detected	can not found
	- o,p'-DDE	µg/L		Not Detected	can not found
	- Alpha Endosulfan	µg/L		Not Detected	can not found
	- Alpha-Chlordane	µg/L		Not Detected	can not found
	- Dieldrin	µg/L		Not Detected	can not found
	- p,p'-DDE	µg/L		Not Detected	can not found
	- o,p'-DDD	µg/L		Not Detected	can not found
	- Endrin	µg/L		Not Detected	can not found
	- Beta Endosulfan	µg/L		Not Detected	can not found
	- p,p'-DDD	µg/L		Not Detected	can not found
	- o,p'-DDT	µg/L		Not Detected	can not found
	- p,p'-DDT	µg/L		Not Detected	can not found
	- Endosulfan sulfate	µg/L		Not Detected	can not found
30	Carbamate ***				
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	can not found
	- Isoproc carb	µg/L		Not Detected	can not found
	- Fenobucarb	µg/L		Not Detected	can not found
	- Promecarb	µg/L		Not Detected	can not found
	- Carbofuran	µg/L		Not Detected	can not found
	- Methiocarb	µg/L		Not Detected	can not found
	- Methomyl	µg/L		Not Detected	can not found
	- Aldicarb	µg/L		Not Detected	can not found
	- Oxamyl	µg/L		Not Detected	can not found
	- Metolcarb	µg/L		Not Detected	can not found
31	Organophosphate *				
	- Dichlorvos (DDVP)	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	can not found
	- Mevinphos	µg/L		Not Detected	can not found
	- Diazinon	µg/L		Not Detected	can not found
	- Dicrotophos	µg/L		Not Detected	can not found
	- Monocrotophos	µg/L		Not Detected	can not found
	- Dimethoate	µg/L		Not Detected	can not found

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## TEST REPORT

**Analysis No.** : R22-2233  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact** : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Report Date** : 15/09/22  
**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.** : S650347Aug

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2208-WW0309	
				W7	
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	can not found
	- Chlorpyrifos	µg/L		Not Detected	can not found
	- Parathion-methyl	µg/L		Not Detected	can not found
	- Pirimiphos	µg/L		Not Detected	can not found
	- Malathion	µg/L		Not Detected	can not found
	- Fenitrothion	µg/L		Not Detected	can not found
	- Parathion	µg/L		Not Detected	can not found
	- Prothiofos	µg/L		Not Detected	can not found
	- Methidathion	µg/L		Not Detected	can not found
	- Profenofos	µg/L		Not Detected	can not found
	- Ethion	µg/L		Not Detected	can not found
	- Triazophos	µg/L		Not Detected	can not found
	- EPN	µg/L		Not Detected	can not found
	- Phosalone	µg/L		Not Detected	can not found
	- Azinphos-ethyl	µg/L		Not Detected	can not found
	Pyrethroid *				
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	can not found
	- Bifenthrin	µg/L		Not Detected	can not found
	- Phenothrin	µg/L		Not Detected	can not found
	- Lambda-Cyhalothrin	µg/L		Not Detected	can not found
	- Cypermethrin	µg/L		Not Detected	can not found
	- Cyfluthrin	µg/L		Not Detected	can not found
	- Fenvalerate	µg/L		Not Detected	can not found

**Remarks** : \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"  
\*\*\* Subcontractor "Not TISI Accredited"  
: W7 = บ่อพักน้ำเสียของโครงการเตาเผา Fluidized Bed ก่อนระบายลงสู่ท่อรวบรวมน้ำเสียของนิคมฯ บางปู (47P 0679119 UTM 1497160)  
**Method** (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ของ พ.ร.บ. ควบคุมมลพิษ, วิทยาลัยเทคนิค วิศวกรรมศาสตร์  
(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD; SW-846 Manual  
**Standard** : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

15.09.22



Mrs. Pornpip Pethshee

Laboratory Manager

15.09.22

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## TEST REPORT

Analysis No. : R22-2508

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Sample Conditions : 2209-WW0153 = clear/slight black sediment,

Flow Rate = 32.0 m<sup>3</sup>/Day, Odor = no smell

Report Date : 13/09/22

Received Date : 06/09/22

Analysis Date : 06-12/09/22

Sampling Date \* : 05/09/22

Sampling By \* : TET

Type of Sample : Wastewater

Job No. : S650347/Sep

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2209-WW0153	
				W7	
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.5	45
2	pH *	-	Electrometric Method (SM 4500 B)	8.11	5.5-9.0
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate	13	600
	Color (pH 7) *	ADMI		11	600
4	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	< 2.5	200
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	114	3,000
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	2	500
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	25	750
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.4	10
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	0.60	100
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	< 0.10	-
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	< 0.01	-
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	0.2
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	1
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	1
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	1
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	1
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	< 0.02	0.75
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	0.25
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005
20	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	< 0.0005	0.25
21	Se *	mg/L		< 0.0005	0.02
22	Ba	mg/L	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> edition, 2017, part 3030 F and part 3120 B	0.06	1.0
23	Cd	mg/L		< 0.02	0.03
24	Cu	mg/L		< 0.05	2.0
25	Mn	mg/L		< 0.02	5.0
26	Ni	mg/L		< 0.02	1.0
27	Pb	mg/L		< 0.04	0.2
28	Zn	mg/L		< 0.04	5.0

continue

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## TEST REPORT

Analysis No. : R22-2508

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 13/09/22

Received Date : 06/09/22

Analysis Date : 06-19/09/22

Sampling Date \* : 05/09/22

Sampling By \* : TET

Type of Sample : Wastewater

Job No. : S650347/Sep

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2209-WW0153 W7	
29	Organochlorine *				
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	can not found
	- Beta-BHC	µg/L		Not Detected	can not found
	- Gamma-BHC (Lindane)	µg/L		Not Detected	can not found
	- Heptachlor	µg/L		Not Detected	can not found
	- Aldrin	µg/L		Not Detected	can not found
	- Dicofof	µg/L		Not Detected	can not found
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	can not found
	- Heptachlor-endo-epoxide (tran-isomer A)	µg/L		Not Detected	can not found
	- Gamma-Chlordane	µg/L		Not Detected	can not found
	- o,p'-DDE	µg/L		Not Detected	can not found
	- Alpha Endosulfan	µg/L		Not Detected	can not found
	- Alpha-Chlordane	µg/L		Not Detected	can not found
	- Dieldrin	µg/L		Not Detected	can not found
	- p,p'-DDE	µg/L		Not Detected	can not found
	- o,p'-DDD	µg/L		Not Detected	can not found
	- Endrin	µg/L		Not Detected	can not found
	- Beta Endosulfan	µg/L		Not Detected	can not found
	- p,p'-DDD	µg/L		Not Detected	can not found
	- o,p'-DDT	µg/L		Not Detected	can not found
	- p,p'-DDT	µg/L		Not Detected	can not found
	- Endosulfan sulfate	µg/L		Not Detected	can not found
30	Carbamate ***				
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	can not found
	- Isoproc carb	µg/L		Not Detected	can not found
	- Fenobucarb	µg/L		Not Detected	can not found
	- Promecarb	µg/L		Not Detected	can not found
	- Carbofuran	µg/L		Not Detected	can not found
	- Methiocarb	µg/L		Not Detected	can not found
	- Methomyl	µg/L		Not Detected	can not found
	- Aldicarb	µg/L		Not Detected	can not found
	- Oxamyl	µg/L		Not Detected	can not found
	- Metolcarb	µg/L		Not Detected	can not found
31	Organophosphate *				
	- Dichlorvos (DDVP)	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>[C]</sup>	Not Detected	can not found
	- Mevinphos	µg/L		Not Detected	can not found
	- Diazinon	µg/L		Not Detected	can not found
	- Dicrotophos	µg/L		Not Detected	can not found
	- Monocrotophos	µg/L		Not Detected	can not found
	- Dimethoate	µg/L		Not Detected	can not found

continue

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

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





## TEST REPORT

**Analysis No. :** R22-2508  
**Customer :** Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address :** 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact :** Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Report Date :** 13/09/22  
**Received Date :** 06/09/22  
**Analysis Date :** 06-12/09/22  
**Sampling Date \* :** 05/09/22  
**Sampling By \* :** TET  
**Type of Sample :** Wastewater  
**Job No. :** S650347/Sep

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2209-WW0153	
				W7	
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	can not found
	- Chlorpyrifos	µg/L		Not Detected	can not found
	- Parathion-methyl	µg/L		Not Detected	can not found
	- Pirimiphos	µg/L		Not Detected	can not found
	- Malathion	µg/L		Not Detected	can not found
	- Fenitrothion	µg/L		Not Detected	can not found
	- Parathion	µg/L		Not Detected	can not found
	- Prothiofos	µg/L		Not Detected	can not found
	- Methidathion	µg/L		Not Detected	can not found
	- Profenofos	µg/L		Not Detected	can not found
	- Ethion	µg/L		Not Detected	can not found
	- Triazophos	µg/L		Not Detected	can not found
	- EPN	µg/L		Not Detected	can not found
	- Phosalone	µg/L		Not Detected	can not found
	- Azinphos-ethyl	µg/L		Not Detected	can not found
	Pyrethroid *				
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	can not found
	- Bifenthrin	µg/L		Not Detected	can not found
	- Phenothrin	µg/L		Not Detected	can not found
	- Lambda-Cyhalothrin	µg/L		Not Detected	can not found
	- Cypermethrin	µg/L		Not Detected	can not found
	- Cyfluthrin	µg/L		Not Detected	can not found
	- Fenvalerate	µg/L		Not Detected	can not found

**Remarks** \* "Test marked "Not TISI Accredited" in this Report are not included in the TISI Accreditation Schedule for our Laboratory"  
\*\*\* Subcontractor "Not TISI Accredited"  
: W7 = บ่อพักน้ำเสียของโครงการเตาเผา Fluidized Bed ก่อนระบายลงสู่ท่อรวบรวมน้ำเสียของนิคมฯ บางปู (47P 0679119 UTM 1497160)  
**Method** (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ของชัย พรธนะสวัสดิ์, วิทยาลัยเทคนิค วิศวกรรมศาสตร์  
(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD: SW: 846 Manual  
**Standard** : Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B/E 7560)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

13, 09, 22



Mrs. Pornpip Pethshee

Laboratory Manager

13, 09, 22

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## TEST REPORT

Analysis No. : R22-2882

Received Date: 11/10/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 18/10/22

Analysis Date : 10-17/10/22

Job No. : S650347/Oct

Sampling Date \* : 10/10/22

Sampling By \* : TET

Type of Sample : Wastewater

Sample Conditions : 2210-WW0300 = clear/slight black sediment, Flow Rate = 71.0 m<sup>3</sup>/Day, Odor = no smell

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard	Analysis Date
				2210-WW0300		
				W7		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.3	45	10/10/22
2	pH *	-	Electrometric Method (SM 4500 B)	8.33	5.5-9.0	10/10/22
3	Color (Original pH) *	ADMI	} ADMI Weighted-Ordinate	22	600	12/10/22
	Color (pH 7) *	ADMI		11	600	12/10/22
4	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	< 2.5	200	14/10/22
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	187	3,000	14/10/22
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	1	500	12-17/10/22
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	16	750	12/10/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	10	17/10/22
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	0.48	100	14/10/22
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	< 0.10	-	14/10/22
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	0.02	-	12/10/22
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	0.2	17/10/22
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	1	14/10/22
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	1	11/10/22
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	1	14/10/22
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	1	11/10/22
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	< 0.02	0.75	14/10/22
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	0.25	11/10/22
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	12/10/22
20	As *	mg/L	} Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	< 0.0005	0.25	14/10/22
21	Se *	mg/L		< 0.0005	0.02	17/10/22
22	Ba	mg/L	} Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> edition, 2017, part 3030 F and part 3120 B	0.09	1.0	14/10/22
23	Cd	mg/L		< 0.02	0.03	14/10/22
24	Cu	mg/L		< 0.05	2.0	14/10/22
25	Mn	mg/L		< 0.02	5.0	14/10/22
26	Ni	mg/L		< 0.02	1.0	14/10/22
27	Pb	mg/L		< 0.04	0.2	14/10/22
28	Zn	mg/L		< 0.04	5.0	14/10/22

continue

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## TEST REPORT

**Analysis No. :** R22-2882

**Received Date:** 11/10/22

**Customer :** Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address :** 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact :** Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

**Report Date :** 18/10/22

**Analysis Date :** 10-28/10/22

**Job No. :** S650347/Oct

**Sampling Date \* :** 10/10/22

**Sampling By \* :** TET

**Type of Sample :** Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard	Analysis Date
				2210-WW0300		
				W7		
29	Organochlorine *					
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	can not found	11-14/10/22
	- Beta-BHC	µg/L		Not Detected	can not found	11-14/10/22
	- Gamma-BHC (Lindane)	µg/L		Not Detected	can not found	11-14/10/22
	- Heptachlor	µg/L		Not Detected	can not found	11-14/10/22
	- Aldrin	µg/L		Not Detected	can not found	11-14/10/22
	- Dicofof	µg/L		Not Detected	can not found	11-14/10/22
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	can not found	11-14/10/22
	- Heptachlor-endo-epoxide (trans-isomer A)	µg/L		Not Detected	can not found	11-14/10/22
	- Gamma-Chlordane	µg/L		Not Detected	can not found	11-14/10/22
	- o,p'-DDE	µg/L		Not Detected	can not found	11-14/10/22
	- Alpha Endosulfan	µg/L		Not Detected	can not found	11-14/10/22
	- Alpha-Chlordane	µg/L		Not Detected	can not found	11-14/10/22
	- Dieldrin	µg/L		Not Detected	can not found	11-14/10/22
	- p,p'-DDE	µg/L		Not Detected	can not found	11-14/10/22
	- o,p'-DDD	µg/L		Not Detected	can not found	11-14/10/22
	- Endrin	µg/L		Not Detected	can not found	11-14/10/22
	- Beta Endosulfan	µg/L		Not Detected	can not found	11-14/10/22
	- p,p'-DDD	µg/L		Not Detected	can not found	11-14/10/22
	- o,p'-DDT	µg/L		Not Detected	can not found	11-14/10/22
	- p,p'-DDT	µg/L		Not Detected	can not found	11-14/10/22
	- Endosulfan sulfate	µg/L		Not Detected	can not found	11-14/10/22
30	Carbamate ***					
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	can not found	19-28/10/22
	- Isoprocab	µg/L		Not Detected	can not found	19-28/10/22
	- Fenobucarb	µg/L		Not Detected	can not found	19-28/10/22
	- Promecarb	µg/L		Not Detected	can not found	19-28/10/22
	- Carbofuran	µg/L		Not Detected	can not found	19-28/10/22
	- Methiocarb	µg/L		Not Detected	can not found	19-28/10/22
	- Methomyl	µg/L		Not Detected	can not found	19-28/10/22
	- Aldicarb	µg/L		Not Detected	can not found	19-28/10/22
	- Oxamyl	µg/L		Not Detected	can not found	19-28/10/22
	- Metolcarb	µg/L		Not Detected	can not found	19-28/10/22
31	Organophosphate *					
	- Dichlorvos (DDVP)	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	can not found	11-18/10/22
	- Mevinphos	µg/L		Not Detected	can not found	11-18/10/22
	- Diazinon	µg/L		Not Detected	can not found	11-18/10/22
	- Dicrotophos	µg/L		Not Detected	can not found	11-18/10/22
	- Monocrotophos	µg/L		Not Detected	can not found	11-18/10/22
	- Dimethoate	µg/L		Not Detected	can not found	11-18/10/22

continue

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

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## TEST REPORT

Analysis No. : R22-2882

Received Date: 11/10/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 18/10/22

Analysis Date : 10-18/10/22

Job No. : S650347/Oct

Sampling Date \* : 10/10/22

Sampling By \* : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard	Analysis Date
				2210-WW0300		
				W7		
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	can not found	11-18/10/22
	- Chlorpyrifos	µg/L		Not Detected	can not found	11-18/10/22
	- Parathion-methyl	µg/L		Not Detected	can not found	11-18/10/22
	- Pirimiphos	µg/L		Not Detected	can not found	11-18/10/22
	- Malathion	µg/L		Not Detected	can not found	11-18/10/22
	- Fenitrothion	µg/L		Not Detected	can not found	11-18/10/22
	- Parathion	µg/L		Not Detected	can not found	11-18/10/22
	- Prothiofos	µg/L		Not Detected	can not found	11-18/10/22
	- Methidathion	µg/L		Not Detected	can not found	11-18/10/22
	- Profenofos	µg/L		Not Detected	can not found	11-18/10/22
	- Ethion	µg/L		Not Detected	can not found	11-18/10/22
	- Triazophos	µg/L		Not Detected	can not found	11-18/10/22
	- EPN	µg/L		Not Detected	can not found	11-18/10/22
	- Phosalone	µg/L		Not Detected	can not found	11-18/10/22
	- Azinphos-ethyl	µg/L		Not Detected	can not found	11-18/10/22
	Pyrethroid *					
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	can not found	11-14/10/22
	- Bifenthrin	µg/L		Not Detected	can not found	11-14/10/22
	- Phenothrin	µg/L		Not Detected	can not found	11-14/10/22
	- Lambda-Cyhalothrin	µg/L		Not Detected	can not found	11-14/10/22
	- Cypermethrin	µg/L		Not Detected	can not found	11-14/10/22
	- Cyfluthrin	µg/L		Not Detected	can not found	11-14/10/22
	- Fenvalerate	µg/L		Not Detected	can not found	11-14/10/22

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

\*\*\* Subcontractor "Not TISI Accredited"

: W7 = บ่อพักน้ำเสียของโครงการเตาเผา Fluidized Bed ก่อนระบายลงสู่ท่อรวบรวมน้ำเสียของนิคมฯ บางปู (47P 0679135 UTM 1497148)

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

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิบูลย์ลักษณ์ วิฤทธิศักดิ์

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

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

Ms. Wareerut Prachumdaeng

Chief of Laboratory

18/10/22



Mrs. Porntip Pethshee

Laboratory Manager

18/10/22

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## TEST REPORT

Analysis No. : R22-3306

Received Date: 21/11/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 29/11/22

Analysis Date : 18-28/11/22

Job No. : S650347/Nov

Sampling Date \* : 18/11/22

Sampling By \* : TET

Type of Sample : Wastewater

Sample Conditions : 2211-WW0642 = white turbid/slight white sediment/smell, Flow Rate = 66.0 m<sup>3</sup>/Day, Odor = smell

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard	Analysis Date
				2211-WW0642		
				W7		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.7	45	18/11/22
2	pH *	-	Electrometric Method (SM 4500 B)	8.08	5.5-9.0	18/11/22
3	Color (Original pH) *	ADMI	} ADMI Weighted-Ordinate	31	600	25/11/22
	Color (pH 7) *	ADMI		28	600	25/11/22
4	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	6.1	200	23/11/22
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	325	3,000	24/11/22
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	4	500	23-28/11/22
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	47	750	23/11/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	10	24/11/22
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	3.13	100	23/11/22
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	1.74	-	23/11/22
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	0.29	-	23/11/22
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	0.2	23/11/22
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	1	25/11/22
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	1	24/11/22
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	1	25/11/22
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	1	22/11/22
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	0.02	0.75	25/11/22
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	0.25	22/11/22
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	24/11/22
20	As *	mg/L	} Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	0.0018	0.25	23/11/22
21	Se *	mg/L		< 0.0005	0.02	23/11/22
22	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.09	1.0	25/11/22
23	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.03	28/11/22
24	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.07	2.0	25/11/22
25	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.03	5.0	25/11/22
26	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	1.0	25/11/22
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)	0.07	5.0	25/11/22

continue

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## TEST REPORT

Analysis No. : R22-3306

Received Date: 21/11/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 29/11/22

Analysis Date : 18-29/11/22

Job No. : S650347/Nov

Sampling Date \* : 18/11/22

Sampling By \* : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard	Analysis Date
				2211-WW0642		
				W7		
29	Organochlorine *					
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	can not found	21-25/11/22
	- Beta-BHC	µg/L		Not Detected	can not found	21-25/11/22
	- Gamma-BHC (Lindane)	µg/L		Not Detected	can not found	21-25/11/22
	- Heptachlor	µg/L		Not Detected	can not found	21-25/11/22
	- Aldrin	µg/L		Not Detected	can not found	21-25/11/22
	- Dicofol	µg/L		Not Detected	can not found	21-25/11/22
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	can not found	21-25/11/22
	- Heptachlor-endo-epoxide (trans-isomer A)	µg/L		Not Detected	can not found	21-25/11/22
	- Gamma-Chlordane	µg/L		Not Detected	can not found	21-25/11/22
	- o,p'-DDE	µg/L		Not Detected	can not found	21-25/11/22
	- Alpha Endosulfan	µg/L		Not Detected	can not found	21-25/11/22
	- Alpha-Chlordane	µg/L		Not Detected	can not found	21-25/11/22
	- Dieldrin	µg/L		Not Detected	can not found	21-25/11/22
	- p,p'-DDE	µg/L		Not Detected	can not found	21-25/11/22
	- o,p'-DDD	µg/L		Not Detected	can not found	21-25/11/22
	- Endrin	µg/L		Not Detected	can not found	21-25/11/22
	- Beta Endosulfan	µg/L		Not Detected	can not found	21-25/11/22
	- p,p'-DDD	µg/L		Not Detected	can not found	21-25/11/22
	- o,p'-DDT	µg/L		Not Detected	can not found	21-25/11/22
	- p,p'-DDT	µg/L		Not Detected	can not found	21-25/11/22
	- Endosulfan sulfate	µg/L		Not Detected	can not found	21-25/11/22
30	Carbamate ***					
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	can not found	22-29/11/22
	- Isoproc carb	µg/L		Not Detected	can not found	22-29/11/22
	- Fenobucarb	µg/L		Not Detected	can not found	22-29/11/22
	- Promecarb	µg/L		Not Detected	can not found	22-29/11/22
	- Carbofuran	µg/L		Not Detected	can not found	22-29/11/22
	- Methiocarb	µg/L		Not Detected	can not found	22-29/11/22
	- Methomyl	µg/L		Not Detected	can not found	22-29/11/22
	- Aldicarb	µg/L		Not Detected	can not found	22-29/11/22
	- Oxamyl	µg/L		Not Detected	can not found	22-29/11/22
	- Metolcarb	µg/L		Not Detected	can not found	22-29/11/22
31	Organophosphate *					
	- Dichlorvos (DDVP)	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	can not found	21-25/11/22
	- Mevinphos	µg/L		Not Detected	can not found	21-25/11/22
	- Diazinon	µg/L		Not Detected	can not found	21-25/11/22
	- Dicrotophos	µg/L		Not Detected	can not found	21-25/11/22
	- Monocrotophos	µg/L		Not Detected	can not found	21-25/11/22
	- Dimethoate	µg/L		Not Detected	can not found	21-25/11/22

continue

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## TEST REPORT

Analysis No. : R22-3306

Report Date : 29/11/22

Received Date: 21/11/22

Analysis Date : 18-28/11/22

Customer : Technical Division of Thai Environmental Technic Limited

Job No. : S650347/Nov

For นิคมอุตสาหกรรมบางปู

Sampling Date \* : 18/11/22

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

Sampling By \* : TET

Type of Sample : Wastewater

Contact : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard	Analysis Date
				2211-WW0642		
				W7		
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	can not found	21-25/11/22
	- Chlorpyrifos	µg/L		Not Detected	can not found	21-25/11/22
	- Parathion-methyl	µg/L		Not Detected	can not found	21-25/11/22
	- Pirimiphos	µg/L		Not Detected	can not found	21-25/11/22
	- Malathion	µg/L		Not Detected	can not found	21-25/11/22
	- Fenitrothion	µg/L		Not Detected	can not found	21-25/11/22
	- Parathion	µg/L		Not Detected	can not found	21-25/11/22
	- Prothiofos	µg/L		Not Detected	can not found	21-25/11/22
	- Methidathion	µg/L		Not Detected	can not found	21-25/11/22
	- Profenofos	µg/L		Not Detected	can not found	21-25/11/22
	- Ethion	µg/L		Not Detected	can not found	21-25/11/22
	- Triazophos	µg/L		Not Detected	can not found	21-25/11/22
	- EPN	µg/L		Not Detected	can not found	21-25/11/22
	- Phosalone	µg/L		Not Detected	can not found	21-25/11/22
	- Azinphos-ethyl	µg/L		Not Detected	can not found	21-25/11/22
	Pyrethroid *					
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	can not found	21-25/11/22
	- Bifenthrin	µg/L		Not Detected	can not found	21-25/11/22
	- Phenothrin	µg/L		Not Detected	can not found	21-25/11/22
	- Lambda-Cyhalothrin	µg/L		Not Detected	can not found	21-25/11/22
	- Cypermethrin	µg/L		Not Detected	can not found	21-25/11/22
	- Cyfluthrin	µg/L		Not Detected	can not found	21-25/11/22
	- Fenvalerate	µg/L		Not Detected	can not found	21-25/11/22

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

\*\*\* Subcontractor "Not TISI Accredited"

: W7 = บ่อพักน้ำเสียของโครงการเคหะ Fluidized Bed ก่อนระบายลงสู่ท่อรวบรวมน้ำเสียของนิคมฯ บางปู (47P 0679135 UTM 1497148)

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

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ของ พ.ร.บ. ส.ส.ว. วิบูลย์ลักษณ์ วิสสุทธี

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

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

Reviewed by

Ms. Wareerut Prachumdaeng  
Chief of Laboratory  
29/11/22



Approved by

Mrs. Pornpip Pethshee  
Laboratory Manager  
29/11/22

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## TEST REPORT

Analysis No. : R22-3559

Received Date: 12/12/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 28/12/22

Analysis Date : 09-19/12/22

Job No. : S650347/Dec

Sampling Date \* : 09/12/22

Sampling By \* : TET

Type of Sample : Wastewater

Sample Conditions : 2212-WW0352 = clear/high black sediment/covered with oil slick/smell, Flow Rate = 19.0 m<sup>3</sup>/Day, Odor = smell

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard	Analysis Date
				2212-WW0352		
				W7		
1	Temperature *	°C	Laboratory and Field, Methods (SM 2550B)	31.6	45	09/12/22
2	pH *	-	Electrometric Method (SM 4500 B)	7.78	5.5-9.0	09/12/22
3	Color (Original pH) *	ADMI	ADMI Weighted-Ordinate	21	600	13/12/22
	Color (pH 7) *	ADMI	Spectrophotometric Method (SM 2120 F)	11	600	13/12/22
4	TSS *	mg/L	Dried at 103-105 °C (SM 2540 D)	< 2.5	200	14/12/22
5	TDS *	mg/L	Dried at 180 °C (SM 2540 C)	168	3,000	14/12/22
6	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	1	500	09-14/12/22
7	COD *	mg/L	Closed Reflux Titrimetric Method (SM 5220 C)	22	750	14/12/22
8	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.4	10	15/12/22
9	TKN *	mg/L	Macro-Kjeldahl/Titrimetric Method (SM 4500-N <sub>org</sub> B&4500-NH <sub>3</sub> C)	0.80	100	19/12/22
10	NH <sub>3</sub> -N *	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	< 0.10	-	19/12/22
11	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	0.08	-	15/12/22
12	Cyanide *	mg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 0.001	0.2	15/12/22
13	Phenols *	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	1	15/12/22
14	Sulfide *	mg/L	ZnS Precipitation, Methylene Blue Colorimetric Method (SM 4500-S <sup>2-</sup> D)	< 0.01	1	13/12/22
15	Formaldehyde *	mg/L	Distillation, Colorimetric Method <sup>(B)</sup>	< 0.01	1	15/12/22
16	Free Chlorine *	mg/L	DPD Ferrous Titrimetric (SM 4500-Cl <sub>2</sub> F)	< 0.01	1	12/12/22
17	Cr <sup>+3</sup> *	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B) ; Filtration, Colorimetric Method (SM 3500-Cr B); Calculation	< 0.02	0.75	15/12/22
18	Cr <sup>+6</sup> *	mg/L	Filtration, Colorimetric Method (SM 3500-Cr B)	< 0.02	0.25	14/12/22
19	Hg *	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.005	16/12/22
20	As *	mg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	< 0.0005	0.25	15/12/22
21	Se *	mg/L		< 0.0005	0.02	15/12/22
22	Ba	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	0.07	1.0	15/12/22
23	Cd	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	0.03	15/12/22
24	Cu	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.05	2.0	15/12/22
25	Mn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	5.0	15/12/22
26	Ni	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.02	1.0	15/12/22
27	Pb	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	0.2	15/12/22
28	Zn	mg/L	Digestion, ICP-OES Method (SM 3030F and 3120B)	< 0.04	5.0	15/12/22

continue

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## TEST REPORT

Analysis No. : R22-3559

Received Date: 12/12/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 28/12/22

Analysis Date : 09-23/12/22

Job No. : S650347/Dec

Sampling Date \* : 09/12/22

Sampling By \* : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard	Analysis Date
				2212-WW0352		
				W7		
29	Organochlorine *					
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	can not found	13-15/12/22
	- Beta-BHC	µg/L		Not Detected	can not found	13-15/12/22
	- Gamma-BHC (Lindane)	µg/L		Not Detected	can not found	13-15/12/22
	- Heptachlor	µg/L		Not Detected	can not found	13-15/12/22
	- Aldrin	µg/L		Not Detected	can not found	13-15/12/22
	- Dicofof	µg/L		Not Detected	can not found	13-15/12/22
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	can not found	13-15/12/22
	- Heptachlor-endo-epoxide (tran-isomer A)	µg/L		Not Detected	can not found	13-15/12/22
	- Gamma-Chlordane	µg/L		Not Detected	can not found	13-15/12/22
	- o,p'-DDE	µg/L		Not Detected	can not found	13-15/12/22
	- Alpha Endosulfan	µg/L		Not Detected	can not found	13-15/12/22
	- Alpha-Chlordane	µg/L		Not Detected	can not found	13-15/12/22
	- Dieldrin	µg/L		Not Detected	can not found	13-15/12/22
	- p,p'-DDE	µg/L		Not Detected	can not found	13-15/12/22
	- o,p'-DDD	µg/L		Not Detected	can not found	13-15/12/22
	- Endrin	µg/L		Not Detected	can not found	13-15/12/22
	- Beta Endosulfan	µg/L		Not Detected	can not found	13-15/12/22
	- p,p'-DDD	µg/L		Not Detected	can not found	13-15/12/22
	- o,p'-DDT	µg/L		Not Detected	can not found	13-15/12/22
	- p,p'-DDT	µg/L		Not Detected	can not found	13-15/12/22
	- Endosulfan sulfate	µg/L		Not Detected	can not found	13-15/12/22
30	Carbamate ***					
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA, WEF, 23 <sup>rd</sup> Edition, 2017. Part 6410B, 6610B, 6630B and 6630C. by LC-MS Technique.	Not Detected	can not found	15-23/12/22
	- Isoprocab	µg/L		Not Detected	can not found	15-23/12/22
	- Fenobucarb	µg/L		Not Detected	can not found	15-23/12/22
	- Promecarb	µg/L		Not Detected	can not found	15-23/12/22
	- Carbofuran	µg/L		Not Detected	can not found	15-23/12/22
	- Methiocarb	µg/L		Not Detected	can not found	15-23/12/22
	- Methomyl	µg/L		Not Detected	can not found	15-23/12/22
	- Aldicarb	µg/L		Not Detected	can not found	15-23/12/22
	- Oxamyl	µg/L		Not Detected	can not found	15-23/12/22
	- Metolcarb	µg/L		Not Detected	can not found	15-23/12/22
31	Organophosphate *					
	- Dichlorvos (DDVP)	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	can not found	13-15/12/22
	- Mevinphos	µg/L		Not Detected	can not found	13-15/12/22
	- Diazinon	µg/L		Not Detected	can not found	13-15/12/22
	- Dicrotophos	µg/L		Not Detected	can not found	13-15/12/22
	- Monocrotophos	µg/L		Not Detected	can not found	13-15/12/22
	- Dimethoate	µg/L		Not Detected	can not found	13-15/12/22

continue

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

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Thai Environmental Technic Limited  
บริษัท เทคนิคสิ่งแวดล้อมไทย จำกัด



ORIGINAL

ต้นฉบับ

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Tel : 0-2373-7799 (Auto) Fax : 0-2373-7979

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## TEST REPORT

Analysis No. : R22-3559

Report Date : 28/12/22

Received Date: 12/12/22

Analysis Date : 09-19/12/22

Customer : Technical Division of Thai Environmental Technic Limited

Job No. : S650347/Dec

For นิคมอุตสาหกรรมบางปู

Sampling Date \* : 09/12/22

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

Sampling By \* : TET

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Type of Sample : Wastewater

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard	Analysis Date
				2212-WW0352		
				W7		
32	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	can not found	13-15/12/22
	- Chlorpyrifos	µg/L		Not Detected	can not found	13-15/12/22
	- Parathion-methyl	µg/L		Not Detected	can not found	13-15/12/22
	- Pirimiphos	µg/L		Not Detected	can not found	13-15/12/22
	- Malathion	µg/L		Not Detected	can not found	13-15/12/22
	- Fenitrothion	µg/L		Not Detected	can not found	13-15/12/22
	- Parathion	µg/L		Not Detected	can not found	13-15/12/22
	- Prothiofos	µg/L		Not Detected	can not found	13-15/12/22
	- Methidathion	µg/L		Not Detected	can not found	13-15/12/22
	- Profenofos	µg/L		Not Detected	can not found	13-15/12/22
	- Ethion	µg/L		Not Detected	can not found	13-15/12/22
	- Triazophos	µg/L		Not Detected	can not found	13-15/12/22
	- EPN	µg/L		Not Detected	can not found	13-15/12/22
	- Phosalone	µg/L		Not Detected	can not found	13-15/12/22
	- Azinphos-ethyl	µg/L		Not Detected	can not found	13-15/12/22
	Pyrethroid *					
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	can not found	13-15/12/22
	- Bifenthrin	µg/L		Not Detected	can not found	13-15/12/22
	- Phenothrin	µg/L		Not Detected	can not found	13-15/12/22
	- Lambda-Cyhalothrin	µg/L		Not Detected	can not found	13-15/12/22
	- Cypermethrin	µg/L		Not Detected	can not found	13-15/12/22
	- Cyfluthrin	µg/L		Not Detected	can not found	13-15/12/22
	- Fenvalerate	µg/L		Not Detected	can not found	13-15/12/22

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

\*\*\* Subcontractor "Not TISI Accredited"

: W7 = บ่อพักน้ำเสียของโครงการเตาเผา Fluidized Bed ก่อนระบายลงสู่ท่อรวบรวมน้ำเสียของนิคมฯ บางปู (47P 0679135 UTM 1497148)

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

(B) คู่มือวิเคราะห์น้ำเสีย พิมพ์ครั้งที่ 3 ธงชัย พรหมสวัสดิ์, วิทยาลัยเกษตรและเทคโนโลยีสุพรรณบุรี

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

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

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

Approved by

Mrs. Pornpip Pethshee

Laboratory Manager



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## TEST REPORT

Analysis No. : R22-1897

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Sample Conditions : 2207-WW0134 = yellow turbid/slight black sediment/foul smell

Report Date : 13/07/22

Received Date : 07/07/22

Analysis Date : 07-11/07/22

Sampling Date : 06/07/22

Sampling By : TET

Type of Sample : Wastewater

Job No. : S650347/July

Item	Parameter	Unit	Method	Result	Standard
				2207-WW0134	
				น้ำเสียรวมที่เข้าบ่อกักน้ำเสีย ของเขตพาณิชยกรรมและที่พักอาศัย	
1	pH	-	Electrometric Method (SM 4500 B)	8.00	5.5-9.0
2	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	< 2.5	200
3	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	19	500
4	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	10
5	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	11.60	-

Remarks : น้ำเสียรวมที่เข้าบ่อกักน้ำเสียของเขตพาณิชยกรรมและที่พักอาศัย = 47P 0679604 UTM 1496362

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

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

Ms. Wareerut Prachumdaeng

Chief of Laboratory

13, 07, 22



Mrs. Pornpip Pethshee

Laboratory Manager

13, 07, 22

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## TEST REPORT

**Analysis No.** : R22-2233  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact** : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730  
**Sample Conditions** : 2208-WW0310 = gray turbid/high black sediment/foul smell

**Report Date** : 15/09/22  
**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.** : S650347Aug

Item	Parameter	Unit	Method	Result	Standard
				2208-WW0310	
				น้ำเสียรวมที่เข้าบ่อกักน้ำเสีย ของเขตพาณิชย์กรรมและที่พักอาศัย	
1	pH	-	Electrometric Method (SM 4500 B)	7.60	5.5-9.0
2	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	6.3	200
3	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	34	500
4	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	2.4	10
5	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	5.91	-

**Remarks** : น้ำเสียรวมที่เข้าบ่อกักน้ำเสียของเขตพาณิชย์กรรมและที่พักอาศัย = 47P 0679606 UTM 1496343  
**Method** : SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
**Standard** : Reference to Notification of the Industrial Estate Authority of Thailand No. 76 (2017) (B.E. 2560)

Ms. Wareerut Prachumdaeng

Chief of Laboratory

15.09.22



Mrs. Pornpip Pethshee

Laboratory Manager

15.09.22

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

Analysis No. : R22-2508

Report Date : 13/09/22

Customer : Technical Division of Thai Environmental Technic Limited

Received Date : 06/09/22

For นิคมอุตสาหกรรมบางปู

Analysis Date : 06-12/09/22

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

Sampling Date : 05/09/22

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Sampling By : TET

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Type of Sample : Wastewater

Sample Conditions : 2209-WW0154 = yellow turbid/high black sediment/covered with oil slick/foul smell

Job No. : S650347/Sep

Item	Parameter	Unit	Method	Result	Standard
				2209-WW0154	
				น้ำเสียรวมที่เข้าบ่อกักน้ำเสีย ของเขตพาณิชย์กรรมและที่พักอาศัย	
1	pH	-	Electrometric Method (SM 4500 B)	8.35	5.5-9.0
2	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	6.9	200
3	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	4	500
4	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	10
5	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	5.32	-

Remarks : น้ำเสียรวมที่เข้าบ่อกักน้ำเสียของเขตพาณิชย์กรรมและที่พักอาศัย = 47P 0679606 UTM 1496343

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

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

Ms. Wareerut Prachumdaeng

Chief of Laboratory

13.09.22



Mrs. Porntip Pethshee

Laboratory Manager

13.09.22

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## TEST REPORT

Analysis No. : R22-2882

Received Date: 11/10/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Sample Conditions : 2210-WW0301 = black turbid/high black sediment/foul smell

Report Date : 18/10/22

Analysis Date : 10-17/10/22

Job No. : S650347/Oct

Sampling Date \* : 10/10/22

Sampling By \* : TET

Type of Sample : Wastewater

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2210-WW0301		
				น้ำเสียรวมที่เข้าบ่อกักน้ำเสีย ของเขตพาณิชย์กรรมและที่พักอาศัย		
1	pH *	-	Electrometric Method (SM 4500 B)	7.57	5.5-9.0	10/10/22
2	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	13.0	200	14/10/22
3	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	6	500	12-17/10/22
4	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	3.7	10	17/10/22
5	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	1.66	-	12/10/22

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

: น้ำเสียรวมที่เข้าบ่อกักน้ำเสียของเขตพาณิชย์กรรมและที่พักอาศัย = 47P 0679605 UTM 1496364

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

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

Ms. Wareerut Prachumdaeng

Chief of Laboratory

18/10/22



Mrs. Porntip Pethshee

Laboratory Manager

18/10/22

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## TEST REPORT

Analysis No. : R22-3306

Report Date : 29/11/22

Received Date: 21/11/22

Analysis Date : 18-28/11/22

Customer : Technical Division of Thai Environmental Technic Limited

Job No. : S650347/Nov

For นิคมอุตสาหกรรมบางปู

Sampling Date : 18/11/22

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

Sampling By : TET

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Type of Sample : Wastewater

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Sample Conditions : 2211-WW0643 = yellow turbid/moderate black sediment/smell

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2211-WW0643		
				น้ำเสียรวมที่เข้าบ่อกักน้ำเสีย ของเขตพาณิชย์กรรมและที่พักอาศัย		
1	pH	-	Electrometric Method (SM 4500 B)	7.53	5.5-9.0	18/11/22
2	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	5.7	200	23/11/22
3	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	18	500	23-28/11/22
4	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	2.3	10	24/11/22
5	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	6.68	-	23/11/22

Remarks : น้ำเสียรวมที่เข้าบ่อกักน้ำเสียของเขตพาณิชย์กรรมและที่พักอาศัย = 47P 0679605 UTM 1496364

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

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

Reviewed by

Ms. Wareerut Prachumdaeng  
Chief of Laboratory  
29/11/22



Approved by

Mrs. Pornpip Pethshee  
Laboratory Manager  
29/11/22

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## TEST REPORT

Analysis No. : R22-3559

Report Date : 28/12/22

Received Date: 12/12/22

Analysis Date : 09-15/12/22

Customer : Technical Division of Thai Environmental Technic Limited

Job No. : S650347/Dec

For นิคมอุตสาหกรรมบางปู

Sampling Date \* : 09/12/22

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

Sampling By \* : TET

Type of Sample : Wastewater

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Sample Conditions : 2212-WW0353 = yellow turbid/high black sediment/covered with oil slick/smell

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2212-WW0353		
				น้ำเสียรวมที่เข้าบ่อกักน้ำเสีย ของเขตพาณิชย์กรรมและที่พักอาศัย		
1	pH *	-	Electrometric Method (SM 4500 B)	7.46	5.5-9.0	09/12/22
2	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	10.8	200	14/12/22
3	BOD *	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	37	500	09-14/12/22
4	Oil & Grease *	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	2.8	10	15/12/22
5	Phosphate *	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	8.26	-	15/12/22

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

: น้ำเสียรวมที่เข้าบ่อกักน้ำเสียของเขตพาณิชย์กรรมและที่พักอาศัย = 47P 0679605 UTM 1496364

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

Standard : Reference to 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

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## TEST REPORT

**Analysis No.** : R22-1897

**Customer** : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact** : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

**Sample Conditions** : 2207-WW0135 = clear/slight black sediment

**Report Date** : 13/07/22

**Received Date** : 07/07/22

**Analysis Date** : 07-11/07/22

**Sampling Date** : 06/07/22

**Sampling By** : TET

**Type of Sample** : Wastewater

**Job No.** : S650347/July

Item	Parameter	Unit	Method	Result	Standard
				2207-WW0135	
				น้ำทิ้งที่ออกจากบ่อกักน้ำเสีย ของเขตพาณิชย์กรรมและที่พักอาศัย	
1	pH	-	Electrometric Method (SM 4500 B)	7.91	5.5-9.0
2	Color (Original pH)	ADMI	} ADMI Weighted-Ordinate	7	600
	Color (pH 7)	ADMI		6	600
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	3.4	200
4	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	3	500
5	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	10
6	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	0.43	-

**Remarks** : น้ำทิ้งที่ออกจากบ่อกักน้ำเสียของเขตพาณิชย์กรรมและที่พักอาศัย = 47P 0679341 UTM 1496530

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

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

Ms. Wareerut Prachumdaeng

Chief of Laboratory

13/07/22



Mrs. Pornpip Pethshee

Laboratory Manager

13/07/22

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

Analysis No. : R22-2233

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Sample Conditions : 2208-WW0311 = white turbid/slight black sediment

Report Date : 15/09/22

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. : S650347Aug

Item	Parameter	Unit	Method	Result	Standard
				2208-WW0311	
				น้ำทิ้งที่ออกจากบ่อกักน้ำเสีย ของเขตพาณิชย์กรรมและที่พักอาศัย	
1	pH	-	Electrometric Method (SM 4500 B)	7.56	5.5-9.0
2	Color (Original pH)	ADMI	} ADMI Weighted-Ordinate	9	600
	Color (pH 7)	ADMI		5	600
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	4.2	200
4	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	3	500
5	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.5	10
6	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	0.77	-

Remarks : น้ำทิ้งที่ออกจากบ่อกักน้ำเสียของเขตพาณิชย์กรรมและที่พักอาศัย = 47P 0679357 UTM 1496572

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

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

Ms. Wareerut Prachumdaeng

Chief of Laboratory

15.09.22



Mrs. Pornip Pethshee

Laboratory Manager

15.09.22

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## TEST REPORT

**Analysis No.** : R22-2508

**Report Date** : 13/09/22

**Customer** : Technical Division of Thai Environmental Technic Limited

**Received Date** : 06/09/22

For นิคมอุตสาหกรรมบางปู

**Analysis Date** : 06-12/09/22

**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

**Sampling Date** : 05/09/22

อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Sampling By** : TET

**Contact** : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

**Type of Sample** : Wastewater

**Sample Conditions** : 2209-WW0155 = clear/slight black sediment/covered with oil slick/smell

**Job No.** : S650347/Sep

Item	Parameter	Unit	Method	Result	Standard
				2209-WW0155	
				น้ำทิ้งที่ออกจากบ่อพักน้ำเสีย ของเขตพาณิชย์กรรมและที่พักอาศัย	
1	pH	-	Electrometric Method (SM 4500 B)	7.89	5.5-9.0
2	Color (Original pH)	ADMI	} ADMI Weighted-Ordinate	12	600
	Color (pH 7)	ADMI		10	600
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	< 2.5	200
4	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	2	500
5	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.4	10
6	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	0.39	-

**Remarks** : น้ำทิ้งที่ออกจากบ่อพักน้ำเสียของเขตพาณิชย์กรรมและที่พักอาศัย = 47P 0679357 UTM 1496572

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

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

Ms. Wareerut Prachumdaeng

Chief of Laboratory

13, 09, 22



Mrs. Pornpip Pethshee

Laboratory Manager

13, 09, 22



## TEST REPORT

**Analysis No.** : R22-2882

**Report Date** : 18/10/22

**Received Date**: 11/10/22

**Analysis Date** : 10-17/10/22

**Customer** : Technical Division of Thai Environmental Technic Limited

**Job No.** : S650347/Oct

For นิคมอุตสาหกรรมบางปู

**Sampling Date** : 10/10/22

**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Sampling By** : TET

**Type of Sample** : Wastewater

**Contact** : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Sample Conditions** : 2210-WW0302 = clear/slight black sediment

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2210-WW0302		
				น้ำทิ้งที่ออกจากบ่อกักน้ำเสียของเขตพาณิชยกรรมและที่พักอาศัย		
1	pH	-	Electrometric Method (SM 4500 B)	7.41	5.5-9.0	10/10/22
2	Color (Original pH)	ADMI	} ADMI Weighted-Ordinate	8	600	17/10/22
	Color (pH 7)	ADMI		7	600	17/10/22
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	< 2.5	200	14/10/22
4	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	3	500	12-17/10/22
5	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	10	17/10/22
6	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	0.37	-	12/10/22

**Remarks** : น้ำทิ้งที่ออกจากบ่อกักน้ำเสียของเขตพาณิชยกรรมและที่พักอาศัย = 47P 0679353 UTM 1496544

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

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

Ms. Wareerut Prachumdaeng

Chief of Laboratory

18/10/22



Mrs. Porntip Pethshee

Laboratory Manager

18/10/22

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





## TEST REPORT

Analysis No. : R22-3306

Report Date : 29/11/22

Received Date: 21/11/22

Analysis Date : 18-28/11/22

Customer : Technical Division of Thai Environmental Technic Limited

Job No. : S650347/Nov

For นิคมอุตสาหกรรมบางปู

Sampling Date : 18/11/22

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

Sampling By : TET

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Type of Sample : Wastewater

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Sample Conditions : 2211-WW0644 = yellow turbid/moderate black sediment/smell

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2211-WW0644		
				น้ำทิ้งที่ออกจากบ่อกักน้ำเสีย ของเขตพาณิชย์กรรมและที่พักอาศัย		
1	pH	-	Electrometric Method (SM 4500 B)	7.57	5.5-9.0	18/11/22
2	Color (Original pH)	ADMI	} ADMI Weighted-Ordinate	61	600	25/11/22
	Color (pH 7)	ADMI		52	600	25/11/22
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	5.6	200	23/11/22
4	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	15	500	23-28/11/22
5	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	1.9	10	24/11/22
6	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	5.61	-	23/11/22

Remarks : น้ำทิ้งที่ออกจากบ่อกักน้ำเสียของเขตพาณิชย์กรรมและที่พักอาศัย = 47P 0679353 UTM 1496544

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

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

Reviewed by

Ms. Wareerut Prachumdaeng  
Chief of Laboratory  
29/11/22



Approved by

Mrs. Pornpip Pethshee  
Laboratory Manager  
29/11/22

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

Analysis No. : R22-3559

Report Date : 28/12/22

Received Date: 12/12/22

Analysis Date : 09-15/12/22

Customer : Technical Division of Thai Environmental Technic Limited

Job No. : S650347/Dec

For นิคมอุตสาหกรรมบางปู

Sampling Date : 09/12/22

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

Sampling By : TET

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Type of Sample : Wastewater

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Sample Conditions : 2212-WW0354 = clear/high black sediment/covered with oil slick/smell

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2212-WW0354		
				น้ำทิ้งที่ออกจากบ่อกักน้ำเสียของเขตพาณิชย์กรรมและที่พักอาศัย		
1	pH	-	Electrometric Method (SM 4500 B)	7.59	5.5-9.0	09/12/22
2	Color (Original pH)	ADMI	} ADMI Weighted-Ordinate	21	600	13/12/22
	Color (pH 7)	ADMI		11	600	13/12/22
3	TSS	mg/L	Dried at 103-105 °C (SM 2540 D)	< 2.5	200	14/12/22
4	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	3	500	09-14/12/22
5	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.4	10	15/12/22
6	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	0.88	-	15/12/22

Remarks : น้ำทิ้งที่ออกจากบ่อกักน้ำเสียของเขตพาณิชย์กรรมและที่พักอาศัย = 47P 0679353 UTM 1496544

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

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

Reviewed by

Ms. Warerut 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
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## TEST REPORT

Analysis No. : R22-3306

Received Date: 21/11/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 29/11/22

Analysis Date : 18-28/11/22

Job No. : S650347/Nov

Sampling Date : 18/11/22

Sampling By : TET

Type of Sample : Wastewater

Sample Conditions : 2211-WW0647 = green turbid/slight green sediment

Item	Parameter	Unit	Method	Result	Standard	Analysis Date
				2211-WW0647		
				บ่อน้ำทิ้งโครงการ		
1	pH	-	Electrometric Method (SM 4500 B)	8.00	5.5-9.0	18/11/22
2	SS	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	3.2	50	23/11/22
3	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	3	20	23-28/11/22
4	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	5	24/11/22

Remarks : บ่อน้ำทิ้งโครงการ = 47P 0679849 UTM 1499689

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

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

Reviewed by

Ms. Wareerut Prachumdaeng  
Chief of Laboratory  
29/11/22



Approved by

Mrs. Pornpip Pethshee  
Laboratory Manager  
29/11/22

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

Analysis No. : R22-2233

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Sample Conditions : 2208-WF0314 = yellow turbid/high black sediment

Report Date : 15/09/22

Received Date : 10/08/22

Analysis Date : 10-17/08/22

Sampling Date : 09/08/22

Sampling By : TET

Type of Sample : Surface Water

Job No. : S650347Aug

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2208-WF0314	
				คลองหกส่วนก่อนไหลผ่านเข้าสู่พื้นที่โครงการระยะ 2A	
1	Temperature	°C	Laboratory and Field, Methods (SM 2550B)	28.8	31.8 <sup>(1)</sup>
2	pH	-	Electrometric Method (SM 4500 B)	7.86	5.0-9.0
3	SS	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	2.5	-
4	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	3	2.0
5	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	-
6	NH <sub>3</sub> -N	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	0.40	0.5
7	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	2.90	-
8	Phenol & Cresol	mg/L	LLE, GC/FID (SW-846 Method 3510C and 8041) <sup>(B)</sup>	< 0.001	0.005 <sup>(2)</sup>
9	Hg	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.002

Remarks : คลองหกส่วนก่อนไหลผ่านเข้าสู่พื้นที่โครงการระยะ 2A = 47P 0679608 UTM 1499667

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

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

Standard : Notification of the National Environment Board No. 8 (1994) (B.E. 2537) ; Class 3

(1) อุณหภูมิ (Temperature) ไม่สูงกว่าอุณหภูมิตามธรรมชาติเกิน 3 องศาเซลเซียส (อ้างอิงอุณหภูมิสภาพธรรมชาติ จุดเหนือขึ้นน้ำไป 500 เมตร คลองหกส่วนก่อนไหลผ่านเข้าสู่พื้นที่โครงการระยะ 2A ตรวจวัดเมื่อวันที่ 9 สิงหาคม 2565 มีค่าเท่ากับ 28.8 °C ดังนั้นมาตรฐานอุณหภูมิคุณภาพน้ำผิวดิน คือ 28.8 °C + 3 °C = 31.8 °C)

(2) Standard for Phenols

Ms. Wareerut Prachumdaeng

Chief of Laboratory

15.09.22



Mrs. Pomtip Pethshee

Laboratory Manager

15.09.22

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

**Analysis No.** : R22-2882  
**Received Date** : 11/10/22  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact** : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Report Date** : 18/10/22  
**Analysis Date** : 10-17/10/22  
**Job No.** : S650347/Oct  
**Sampling Date** : 10/10/22  
**Sampling By** : TET  
**Type of Sample** : Surface Water

**Sample Conditions** : 2210-WF0305 = yellow turbid/high yellow sediment

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard	Analysis Date
				2210-WF0305		
				คลองหกส่วนก่อนไหลผ่านเข้าสู่พื้นที่โครงการระยะ 2A		
1	Temperature	°C	Laboratory and Field, Methods (SM 2550B)	29.2	32.2 <sup>(1)</sup>	10/10/22
2	pH	-	Electrometric Method (SM 4500 B)	7.54	5.0-9.0	10/10/22
3	SS	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	6.4	-	14/10/22
4	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	2	2.0	12-17/10/22
5	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-	17/10/22
6	NH <sub>3</sub> -N	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	1.87	0.5	14/10/22
7	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	1.05	-	12/10/22
8	Phenol & Cresol	mg/L	LLE, GC/FID (SW-846 Method 3510C and 8041) <sup>(B)</sup>	< 0.001	0.005 <sup>(2)</sup>	11-17/10/22
9	Hg	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.002	12/10/22

**Remarks** : คลองหกส่วนก่อนไหลผ่านเข้าสู่พื้นที่โครงการระยะ 2A = 47P 0679608 UTM 1499667

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

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

**Standard** : Notification of the National Environment Board No. 8 (1994) (B.E. 2537) ; Class 3

(1) อุณหภูมิ (Temperature) ไม่สูงกว่าอุณหภูมิตามธรรมชาติเกิน 3 องศาเซลเซียส  
(อ้างอิงอุณหภูมิสภาพธรรมชาติ จุดเหนือน้ำขึ้นไป 500 เมตร คลองหกส่วนก่อนไหลผ่านเข้าสู่พื้นที่โครงการระยะ 2A ตรวจวัดเมื่อวันที่ 10 ตุลาคม 2565 มีค่าเท่ากับ 29.2 °C ดังนั้นมาตรฐานอุณหภูมิคุณภาพน้ำผิวดิน คือ 29.2 °C + 3 °C = 32.2 °C)

(2) Standard for Phenols

Ms. Wareerut Prachumdaeng

Chief of Laboratory

18.10.22



Mrs. Pomtip Pethshee

Laboratory Manager

18.10.22

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

Analysis No. : R22-2233

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

Sample Conditions : 2208-WF0315 = yellow turbid/high black sediment

Report Date : 15/09/22

Received Date : 10/08/22

Analysis Date : 10-17/08/22

Sampling Date : 09/08/22

Sampling By : TET

Type of Sample : Surface Water

Job No. : S650347Aug

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2208-WF0315	
				คลองลำบางคี่กอนไหลบรรจบ กับคลองหกส่วน	
1	Temperature	°C	Laboratory and Field, Methods (SM 2550B)	28.7	30.1 <sup>(1)</sup>
2	pH	-	Electrometric Method (SM 4500 B)	7.62	5.0-9.0
3	SS	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	< 2.5	-
4	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	4	2.0
5	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-
6	NH <sub>3</sub> -N	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	5.85	0.5
7	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	3.12	-
8	Phenol & Cresol	mg/L	LLE, GC/FID (SW-846 Method 3510C and 8041) <sup>(B)</sup>	< 0.001	0.005 <sup>(2)</sup>
9	Hg	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.002

Remarks : คลองลำบางคี่กอนไหลบรรจบกับคลองหกส่วน = 47P 0681387 UTM 1499482

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

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

Standard : Notification of the National Environment Board No. 8 (1994) (B.E. 2537) ; Class 3

(1) อุณหภูมิ (Temperature) ไม่สูงกว่าอุณหภูมิตามธรรมชาติเกิน 3 องศาเซลเซียส  
(อ้างอิงอุณหภูมิสภาพธรรมชาติ จุดเหนือน้ำขึ้นไป 500 เมตร คลองลำบางคี่กอนไหลบรรจบกับคลองหกส่วน ตรวจวัดเมื่อวันที่ 9 สิงหาคม 2565  
มีค่าเท่ากับ 27.1 °C ดังนั้นมาตรฐานอุณหภูมิคุณภาพน้ำผิวดิน คือ 27.1 °C + 3 °C = 30.1 °C)

(2) Standard for Phenols

Ms. Wareerut Prachumdaeng

Chief of Laboratory

15.09.22



Mrs. Pornpip Pethshee

Laboratory Manager

15.09.22

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## TEST REPORT

**Analysis No.** : R22-2882  
**Received Date** : 11/10/22  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact** : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730  
**Sample Conditions** : 2210-WF0306 = yellow turbid/high black sediment

**Report Date** : 18/10/22  
**Analysis Date** : 10-17/10/22  
**Job No.** : S650347/Oct  
**Sampling Date** : 10/10/22  
**Sampling By** : TET  
**Type of Sample** : Surface Water

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard	Analysis Date
				2210-WF0306		
				คล่องตัวบางฝืดก่อนไหลบรรจบ กับคลองหกส่วน		
1	Temperature	°C	Laboratory and Field, Methods (SM 2550B)	29.2	32.3 <sup>(1)</sup>	10/10/22
2	pH	-	Electrometric Method (SM 4500 B)	7.49	5.0-9.0	10/10/22
3	SS	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	5.8	-	14/10/22
4	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	2	2.0	12-17/10/22
5	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-	17/10/22
6	NH <sub>3</sub> -N	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	1.99	0.5	14/10/22
7	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	0.88	-	12/10/22
8	Phenol & Cresol	mg/L	LLE , GC/FID (SW-846 Method 3510C and 8041) <sup>(B)</sup>	< 0.001	0.005 <sup>(2)</sup>	11-17/10/22
9	Hg	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.002	12/10/22

**Remarks** : คล่องตัวบางฝืดก่อนไหลบรรจบกับคลองหกส่วน = 47P 0681387 UTM 1499462  
**Method** (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
(B) SW 846 = U.S. Environmental Protection Agency TEST METHOD: SW: 846 Manual  
**Standard** : Notification of the National Environment Board No. 8 (1994) (B.E. 2537) ; Class 3  
(1) อุณหภูมิ (Temperature) ไม่สูงกว่าอุณหภูมิตามธรรมชาติเกิน 3 องศาเซลเซียส  
(อ้างอิงอุณหภูมิสภาพธรรมชาติ จุดเหนือน้ำขึ้นไป 500 เมตร คล่องตัวบางฝืดก่อนไหลบรรจบกับคลองหกส่วน ตรวจวัดเมื่อวันที่ 10 ตุลาคม 2565  
มีค่าเท่ากับ 29.3 °C ดังนั้นมาตรฐานอุณหภูมิคุณภาพน้ำผิวดิน คือ 29.3 °C + 3 °C = 32.3 °C)  
(2) Standard for Phenols

Ms. Wareerut Prachumdaeng

Chief of Laboratory

18/10/22



Mrs. Porntip Pethshee

Laboratory Manager

18/10/22

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



## TEST REPORT

**Analysis No.** : R22-2233

**Customer** : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact** : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Sample Conditions** : 2208-WF0316 = yellow turbid/high black sediment

**Report Date** : 15/09/22

**Received Date** : 10/08/22

**Analysis Date** : 10-17/08/22

**Sampling Date** : 09/08/22

**Sampling By** : TET

**Type of Sample** : Surface Water

**Job No.** : S650347Aug

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2208-WF0316	
				คลองลำบางผีช่วงก่อนไหลออกจากพื้นที่โครงการระยะ 2B	
1	Temperature	°C	Laboratory and Field, Methods (SM 2550B)	28.0	31.0 <sup>(1)</sup>
2	pH	-	Electrometric Method (SM 4500 B)	7.74	5.0-9.0
3	SS	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	6.9	-
4	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	2	2.0
5	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	-
6	NH <sub>3</sub> -N	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	< 0.10	0.5
7	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	2.08	-
8	Phenol & Cresol	mg/L	LLE, GC/FID (SW-846 Method 3510C and 8041) <sup>(B)</sup>	< 0.001	0.005 <sup>(2)</sup>
9	Hg	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.002

**Remarks** : คลองลำบางผีช่วงก่อนไหลออกจากพื้นที่โครงการระยะ 2B = 47P 0681284 UTM 1499048

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

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

**Standard** : Notification of the National Environment Board No. 8 (1994) (B.E. 2537) ; Class 3

(1) อุณหภูมิ (Temperature) ไม่สูงกว่าอุณหภูมิตามธรรมชาติเกิน 3 องศาเซลเซียส

(อ้างอิงอุณหภูมิสภาพธรรมชาติ จุดเหนือเขื่อนไป 500 เมตร คลองลำบางผีช่วงก่อนไหลออกจากพื้นที่โครงการระยะ 2B ตรวจวัดเมื่อวันที่ 9 สิงหาคม 2565 มีค่าเท่ากับ 28.0 °C ดังนั้นมาตรฐานอุณหภูมิคุณภาพน้ำผิวดิน คือ 28.0 °C + 3 °C = 31.0 °C)

(2) Standard for Phenols

Ms. Wareerut Prachumdaeng

Chief of Laboratory

15.09.22



Mrs. Pornpip Pethshee

Laboratory Manager

15.09.22





## TEST REPORT

Analysis No. : R22-2882

Received Date : 11/10/22

Customer : Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

Sample Conditions : 2210-WF0307 = yellow turbid/high yellow sediment

Report Date : 18/10/22

Analysis Date : 10-17/10/22

Job No. : S650347/Oct

Sampling Date : 10/10/22

Sampling By : TET

Type of Sample : Surface Water

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard	Analysis Date
				2210-WF0307		
				คลองลำบางผีช่วงก่อนไหลออก จากพื้นที่โครงการระยะ 2B		
1	Temperature	°C	Laboratory and Field, Methods (SM 2550B)	28.3	31.0 <sup>(1)</sup>	10/10/22
2	pH	-	Electrometric Method (SM 4500 B)	7.50	5.0-9.0	10/10/22
3	SS	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	< 2.5	-	14/10/22
4	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	3	2.0	12-17/10/22
5	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	-	17/10/22
6	NH <sub>3</sub> -N	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	0.30	0.5	14/10/22
7	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	0.60	-	12/10/22
8	Phenol & Cresol	mg/L	LLE, GC/FID (SW-846 Method 3510C and 8041) <sup>(B)</sup>	< 0.001	0.005 <sup>(2)</sup>	11-17/10/22
9	Hg	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.002	12/10/22

Remarks : คลองลำบางผีช่วงก่อนไหลออกจากพื้นที่โครงการระยะ 2B = 47P 0681281 UTM 1499048

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

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

Standard : Notification of the National Environment Board No. 8 (1994) (B.E. 2537) ; Class 3

(1) อุณหภูมิ (Temperature) ไม่สูงกว่าอุณหภูมิตามธรรมชาติเกิน 3 องศาเซลเซียส  
(อ้างอิงอุณหภูมิสภาพธรรมชาติ จุดเหนือน้ำขึ้นไป 500 เมตร คลองลำบางผีช่วงก่อนไหลออกจากพื้นที่โครงการระยะ 2B ตรวจวัดเมื่อวันที่ 10 ตุลาคม 2565 มีค่าเท่ากับ 28.0 °C ดังนั้นมาตรฐานอุณหภูมิคุณภาพน้ำผิวดิน คือ 28.0 °C + 3 °C = 31.0 °C)

(2) Standard for Phenols

Ms. Wareerut Prachumdaeng

Chief of Laboratory

18/10/22



Mrs. Pornpip Pethshee

Laboratory Manager

18/10/22



## TEST REPORT

**Analysis No.** : R22-2233  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact** : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730  
**Sample Conditions** : 2208-WF0317 = black turbid/high black sediment/foul smell

**Report Date** : 15/09/22  
**Received Date** : 10/08/22  
**Analysis Date** : 10-17/08/22  
**Sampling Date** : 09/08/22  
**Sampling By** : TET  
**Type of Sample** : Surface Water  
**Job No.** : S650347Aug

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard
				2208-WF0317	
				คลองสลัดก่อนไหลบรรจบกับ คลองชลประทานกันน้ำเค็ม	
1	Temperature	°C	Laboratory and Field, Methods (SM 2550B)	31.0	34.0 <sup>(1)</sup>
2	pH	-	Electrometric Method (SM 4500 B)	7.28	5.0-9.0
3	SS	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	< 2.5	-
4	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	9	2.0
5	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.7	-
6	NH <sub>3</sub> -N	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	4.59	0.5
7	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	2.72	-
8	Phenol & Cresol	mg/L	LLE, GC/FID (SW-846 Method 3510C and 8041) <sup>(B)</sup>	< 0.001	0.005 <sup>(2)</sup>
9	Hg	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.002

**Remarks** : คลองสลัดก่อนไหลบรรจบกับคลองชลประทานกันน้ำเค็ม = 47P 0679515 UTM 1496339  
**Method** (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
(B) SW 846 = U.S. Environmental Protection Agency TEST METHOD: SW: 846 Manual  
**Standard** : Notification of the National Environment Board No. 8 (1994) (B.E. 2537) ; Class 3  
(1) อุณหภูมิ (Temperature) ไม่สูงกว่าอุณหภูมิตามธรรมชาติเกิน 3 องศาเซลเซียส  
(อ้างอิงอุณหภูมิสภาพธรรมชาติ จุดเหนือน้ำขึ้น ไป 500 เมตร คลองสลัดก่อนไหลบรรจบกับคลองชลประทานกันน้ำเค็ม ตรวจวัดเมื่อวันที่ 9 สิงหาคม 2565 มีค่าเท่ากับ 31.0 °C ดังนั้นมาตรฐานอุณหภูมิคุณภาพน้ำผิวดิน คือ 31.0 °C + 3 °C = 34.0 °C)  
(2) Standard for Phenols

Ms. Wareerut Prachumdaeng

Chief of Laboratory

15.09.22



Mrs. Porntip Pethshee

Laboratory Manager

15.09.22

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





## TEST REPORT

**Analysis No.** : R22-2882  
**Received Date** : 11/10/22  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact** : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Report Date** : 18/10/22  
**Analysis Date** : 10-17/10/22  
**Job No.** : S650347/Oct  
**Sampling Date** : 10/10/22  
**Sampling By** : TET  
**Type of Sample** : Surface Water

**Sample Conditions** : 2210-WF0308 = yellow turbid/high yellow sediment

Item	Parameter	Unit	Method <sup>(A)</sup>	Result	Standard	Analysis Date
				2210-WF0308		
				คลองสลัดก่อนไหลบรรจบกับ คลองชลประทานกันน้ำเค็ม		
1	Temperature	°C	Laboratory and Field, Methods (SM 2550B)	28.3	31.2 <sup>(1)</sup>	10/10/22
2	pH	-	Electrometric Method (SM 4500 B)	7.62	5.0-9.0	10/10/22
3	SS	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	< 2.5	-	14/10/22
4	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	2	2.0	12-17/10/22
5	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	-	17/10/22
6	NH <sub>3</sub> -N	mg/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	2.41	0.5	14/10/22
7	Phosphate	mg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	0.63	-	12/10/22
8	Phenol & Cresol	mg/L	LLE, GC/FID (SW-846 Method 3510C and 8041) <sup>(B)</sup>	< 0.001	0.005 <sup>(2)</sup>	11-17/10/22
9	Hg	mg/L	Cold-Vapor AAS Method (SM 3112 B)	< 0.0005	0.002	12/10/22

**Remarks** : คลองสลัดก่อนไหลบรรจบกับคลองชลประทานกันน้ำเค็ม = 47P 0679513 UTM 1496389

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

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

**Standard** : Notification of the National Environment Board No. 8 (1994) (B.E. 2537) ; Class 3

(1) อุณหภูมิ (Temperature) ไม่สูงกว่าอุณหภูมิตามธรรมชาติเกิน 3 องศาเซลเซียส  
(อ้างอิงอุณหภูมิสภาพธรรมชาติ จุดเหนือน้ำขึ้นไป 500 เมตร คลองสลัดก่อนไหลบรรจบกับคลองชลประทานกันน้ำเค็ม ตรวจวัดเมื่อวันที่ 10 ตุลาคม 2565  
มีค่าเท่ากับ 28.2 °C ดังนั้นมาตรฐานอุณหภูมิคุณภาพน้ำผิวดิน คือ 28.2 °C + 3 °C = 31.2 °C)

(2) Standard for Phenols

Ms. Wareerut Prachumdaeng  
Chief of Laboratory  
18/10/22



Mrs. Porntip Pethshee  
Laboratory Manager  
18/10/22

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

Analysis No.: R22-2233

Report Date : 15/09/22

Customer : Technical Division of Thai Environmental Technic Limited

Received Date : 10/08/22

For นิคมอุตสาหกรรมบางปู

Analysis Date : 10/08/22

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

Sampling Date : 09/08/22

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Sampling By : TET

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Type of Sample : Surface Water

Job No. : S650347Aug

Item	Sampling Point	Result
		Temperature (°C)
	จุดเหื่อน้ำขึ้นไป 500 เมตร	
1	คลองหกส่วนก่อนไหลผ่านเข้าสู่พื้นที่โครงการระยะ 2A	28.8
2	คลองลำบางฝีก่อนไหลบรรจบกับคลองหกส่วน	27.1
3	คลองลำบางฝีก่อนไหลออกจากพื้นที่โครงการระยะ 2B	28.0
4	คลองสลัดก่อนไหลบรรจบกับคลองชลประทานกั้นน้ำเค็ม	31.0

Remarks : คลองหกส่วนก่อนไหลผ่านเข้าสู่พื้นที่โครงการระยะ 2A = 47P 0679519 UTM 1499721  
คลองลำบางฝีก่อนไหลบรรจบกับคลองหกส่วน = 47P 0681453 UTM 1499462  
คลองลำบางฝีก่อนไหลออกจากพื้นที่โครงการระยะ 2B = 47P 0681291 UTM 1499101  
คลองสลัดก่อนไหลบรรจบกับคลองชลประทานกั้นน้ำเค็ม = 47P 0679556 UTM 1496478

Method : Temperature - Laboratory and Field, Methods (SM 2550B)

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

Ms. Wareerut Prachumdaeng

Chief of Laboratory

15.09.22



Mrs. Pornpip Pethshee

Laboratory Manager

15.09.22

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

Analysis No. : R22-2882

Received Date : 11/10/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 18/10/22

Analysis Date : 10/10/22

Job No. : S650347/Oct

Sampling Date : 10/10/22

Sampling By : TET

Type of Sample : Surface Water

Item	Sampling Point	Result	Analysis Date
		Temperature (°C)	
	จุดเหื่อน้ำขึ้นไป 500 เมตร		
1	คลองหกส่วนก่อนไหลผ่านเข้าสู่พื้นที่โครงการระยะ 2A	29.2	10/10/22
2	คลองลำบางฝีก่อนไหลบรรจบกับคลองหกส่วน	29.3	10/10/22
3	คลองลำบางฝีก่อนไหลออกจากพื้นที่โครงการระยะ 2B	28.0	10/10/22
4	คลองสลัดก่อนไหลบรรจบกับคลองชลประทานกั้นน้ำเค็ม	28.2	10/10/22

Remarks : คลองหกส่วนก่อนไหลผ่านเข้าสู่พื้นที่โครงการระยะ 2A = 47P 0679156 UTM 1499882  
คลองลำบางฝีก่อนไหลบรรจบกับคลองหกส่วน = 47P 0681565 UTM 1499927  
คลองลำบางฝีก่อนไหลออกจากพื้นที่โครงการระยะ 2B = 47P 0680959 UTM 1499427  
คลองสลัดก่อนไหลบรรจบกับคลองชลประทานกั้นน้ำเค็ม = 47P 0679765 UTM 1496819

Method : Temperature - Laboratory and Field, Methods (SM 2550B)

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

Ms. Wareerut Prachumdaeng

Chief of Laboratory

18/10/22



Mrs. Pornpip Pethshee

Laboratory Manager

18/10/22

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



## TEST REPORT

Analysis No. : R22-2233

Report Date : 15/09/22

Customer : Technical Division of Thai Environmental Technic Limited

Received Date : 10/08/22

For นิคมอุตสาหกรรมบางปู

Analysis Date : 10/08-08/09/22

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

Sampling Date : 09/08/22

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Sampling By : TET

Contact : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

Type of Sample : Seawater

Sample Conditions : 2208-WS0318 = brown turbid/slight black sediment,

Job No. : S650347Aug

Oil & Grease = not visible, 2208-WS0319 = gray turbid/slight black sediment, Oil & Grease = not visible

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard
				2208-WS0318	2208-WS0319	
				จุดระบายน้ำทิ้ง ริมถนนสุขุมวิท บริเวณ กม. ที่ 34 (Mixing Zone)	คลองห้วยลำภูหน้า ประตูระบายน้ำก่อน ไหลลงสู่ทะเล ประมาณ 50 เมตร	
1	pH	-	Electrometric Method (SM 4500 B)	8.22	8.18	7.0-8.5
2	SS	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	6.2	32.0	(1)
3	TDS	mg/L	Dried at 180 °C (SM 2540 C)	1,885	1,321	-
4	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	2	2	-
5	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.6	0.7	not visible
6	NH <sub>3</sub> -N	µg-N/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	860	980	-
7	Phosphate	µg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	8,440	2,270	-
8	Cyanide	µg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 1	6	7
9	Phenol	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	0.03
10	Cr <sup>+6</sup>	µg/L	Digestion, Electrothermal AAS Method (SM 3030E and 3113B)	< 1.0	< 1.0	50
11	Pb	µg/L	Digestion, Electrothermal AAS Method (SM 3030E and 3113B)	< 1.0	< 1.0	8.5
12	Cd	µg/L	Digestion, Electrothermal AAS Method (SM 3030E and 3113B)	< 1.0	< 1.0	5
13	Ni	µg/L	Digestion, Electrothermal AAS Method (SM 3030E and 3113B)	31.2	18.2	-
14	Total Cr	µg/L	Digestion, Electrothermal AAS Method (SM 3030E and 3113B)	< 1.0	< 1.0	100
15	Cu	µg/L	Digestion, Electrothermal AAS Method (SM 3030E and 3113B)	12.2	1.6	8
16	Hg *	µg/L	Cold-Vapor Fluorescence Method	0.19	0.28	0.1
17	As	µg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	4.0	3.2	10
18	Zn	µg/L	Solvent Extraction, ICP <sup>(B)</sup>	160	80	50

continue

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## TEST REPORT

Analysis No. : R22-2233

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 15/09/22

Received Date : 10/08/22

Analysis Date : 10-30/08/22

Sampling Date : 09/08/22

Sampling By : TET

Type of Sample : Seawater

Job No. : S650347Aug

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard
				2208-WS0318	2208-WS0319	
				จุดระบายน้ำทิ้งริมถนน สุขุมวิทบริเวณ กม. ที่ 34 (Mixing Zone)	คลองห้วยลำภูหน้าประตู ระบายน้ำก่อนไหลลงสู่ ทะเลประมาณ 50 เมตร	
19	Organochlorine					
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	Not Detected	-
	- Beta-BHC	µg/L		Not Detected	Not Detected	-
	- Gamma-BHC (Lindane)	µg/L		Not Detected	Not Detected	0.16
	- Heptachlor	µg/L		Not Detected	Not Detected	0.0036
	- Aldrin	µg/L		Not Detected	Not Detected	1.3
	- Dicofol	µg/L		Not Detected	Not Detected	-
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	Not Detected	-
	- Heptachlor-endo-epoxide (trans-isomer A)	µg/L		Not Detected	Not Detected	-
	- Gamma-Chlordane	µg/L		Not Detected	Not Detected	-
	- o,p'-DDE	µg/L		Not Detected	Not Detected	-
	- Alpha Endosulfan	µg/L		Not Detected	Not Detected	-
	- Alpha-Chlordane	µg/L		Not Detected	Not Detected	-
	- Dieldrin	µg/L		Not Detected	Not Detected	0.0019
	- p,p'-DDE	µg/L		Not Detected	Not Detected	-
	- o,p'-DDD	µg/L		Not Detected	Not Detected	-
	- Endrin	µg/L		Not Detected	Not Detected	0.0023
	- Beta Endosulfan	µg/L		Not Detected	Not Detected	-
	- p,p'-DDD	µg/L		Not Detected	Not Detected	-
	- o,p'-DDT	µg/L		Not Detected	Not Detected	-
	- p,p'-DDT	µg/L		Not Detected	Not Detected	-
	- Endosulfan sulfate	µg/L		Not Detected	Not Detected	-
20	Carbamate *					
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition 2017, Part 6410B, 6610B, 6630B and 6630C by LC-MS Technique.	Not Detected	Not Detected	can not found
	- Isoproc carb	µg/L		Not Detected	Not Detected	-
	- Fenobucarb	µg/L		Not Detected	Not Detected	-
	- Promecarb	µg/L		Not Detected	Not Detected	-
	- Carbofuran	µg/L		Not Detected	Not Detected	-
	- Methiocarb	µg/L		Not Detected	Not Detected	-
	- Methomyl	µg/L		Not Detected	Not Detected	-
	- Aldicarb	µg/L		Not Detected	Not Detected	-
	- Oxamyl	µg/L		Not Detected	Not Detected	-
	- Metolcarb	µg/L		Not Detected	Not Detected	-
21	Organophosphate					
	- DDVP	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	-
	- Mevinphos	µg/L		Not Detected	Not Detected	-
	- Diazinon	µg/L		Not Detected	Not Detected	-
	- Dicrotophos	µg/L		Not Detected	Not Detected	-
	- Monocrotophos	µg/L		Not Detected	Not Detected	-
	- Dimethoate	µg/L		Not Detected	Not Detected	-

continue

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## TEST REPORT

**Analysis No. :** R22-2233  
**Customer :** Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address :** 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact :** Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Report Date :** 15/09/22  
**Received Date :** 10/08/22  
**Analysis Date :** 10-17/08/22  
**Sampling Date :** 09/08/22  
**Sampling By :** TET  
**Type of Sample :** Seawater  
**Job No. :** S650347Aug

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard
				2208-WS0318	2208-WS0319	
				จุดระบายน้ำทิ้งริมถนน สุขุมวิทบริเวณ กม. ที่ 34 (Mixing Zone)	คลองห้วยลำภูหน้าประตู ระบายน้ำก่อนไหลลงสู่ ทะเลประมาณ 50 เมตร	
22	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	-
	- Chlorpyrifos	µg/L		Not Detected	Not Detected	can not found
	- Parathion-methyl	µg/L		Not Detected	Not Detected	-
	- Pirimiphos-ethyl	µg/L		Not Detected	Not Detected	-
	- Malathion	µg/L		Not Detected	Not Detected	can not found
	- Fenitrothion	µg/L		Not Detected	Not Detected	-
	- Parathion ethyl	µg/L		Not Detected	Not Detected	-
	- Prothiofos	µg/L		Not Detected	Not Detected	-
	- Methidathion	µg/L		Not Detected	Not Detected	-
	- Profenofos	µg/L		Not Detected	Not Detected	-
	- Ethion	µg/L		Not Detected	Not Detected	-
	- Triazophos	µg/L		Not Detected	Not Detected	-
	- EPN	µg/L		Not Detected	Not Detected	-
	- Phosalone	µg/L		Not Detected	Not Detected	-
	- Azinphos-ethyl	µg/L		Not Detected	Not Detected	-
	Pyrethroid					
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	Not Detected	-
	- Bifenthrin	µg/L		Not Detected	Not Detected	-
	- Phenothrin	µg/L		Not Detected	Not Detected	-
	- Lambda-Cyhalothrin	µg/L		Not Detected	Not Detected	-
	- Cypermethrin	µg/L		Not Detected	Not Detected	can not found
	- Cyfluthrin	µg/L		Not Detected	Not Detected	-
	- Fenvalerate	µg/L		Not Detected	Not Detected	-

**Remarks** \* Subcontractor  
: จุดระบายน้ำทิ้งริมถนนสุขุมวิทบริเวณ กม. ที่ 34 (Mixing Zone) = 47P 0676018 UTM 1496901  
: คลองห้วยลำภูหน้าประตูระบายน้ำก่อนไหลลงสู่ทะเลประมาณ 50 เมตร = 47P 0675668 UTM 1496307  
(1) สารแขวนลอย (Suspended Solids) มีค่าเปลี่ยนแปลงเพิ่มขึ้นไม่เกินผลรวมของค่าเฉลี่ย 1 วัน หรือ 1 เดือน หรือ 1 ปี บวกกับค่าเบี่ยงเบนมาตรฐานของค่าเฉลี่ยนั้น ๆ โดยค่าเฉลี่ย 1 วัน ให้วัดทุกชั่วโมง หรืออย่างน้อย 5 ครั้ง ที่ช่วงเวลาเท่า ๆ กัน ค่าเฉลี่ย 1 เดือน ให้วัดทุกวันหรืออย่างน้อย 4 ครั้ง ที่ช่วงเวลาเท่า ๆ กัน ใน 1 เดือน ณ เวลาเดียวกัน และค่าเฉลี่ย 1 ปี ให้วัดทุกเดือน ณ วันที่และเวลาเดียวกัน

**Method** (A) SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017  
(B) Methods of Seawater Analysis edited by K. Grasshoff Kremling, M. Ehrhardt third, Completely Revised and Extended Edition  
(C) SW 846 = U.S. Environmental Protection Agency TEST METHOD: SW-846 Manual

**Standard** : Notification of the National Environment Board (2021) (B.E. 2564) ; Class 5

Ms. Wareerut Prachumdaeng  
Chief of Laboratory  
15, 09, 22



Mrs. Pomtip Pethshee  
Laboratory Manager  
15, 09, 22

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## TEST REPORT

**Analysis No. :** R22-2233 **Report Date :** 15/09/22  
**Customer :** Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู **Received Date :** 10/08/22  
**Address :** 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่ **Analysis Date :** 15/08/22  
อำเภอเมือง จังหวัดสมุทรปราการ 10280 **Sampling Date :** 09/08/22  
**Contact :** Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730 **Sampling By :** TET  
**Type of Sample :** Seawater  
**Sample Conditions :** 2208-WS0318 (1/5) - 2208-WS0318 (5/5) = brown turbid/slight black sediment **Job No. :** S650347Aug  
2208-WS0319 (1/5) - 2208-WS0319 (5/5) = gray turbid/slight black sediment

Item	Sample No.	Sampling Point	Result
			SS (mg/L)
		จุดระบายน้ำทิ้งริมถนนสุขุมวิทบริเวณ กม. ที่ 34 (Mixing Zone)	
1	2208-WS0318 (1/5)	ครั้งที่ 1	5.9
2	2208-WS0318 (2/5)	ครั้งที่ 2	6.9
3	2208-WS0318 (3/5)	ครั้งที่ 3	5.7
4	2208-WS0318 (4/5)	ครั้งที่ 4	6.2
5	2208-WS0318 (5/5)	ครั้งที่ 5	5.9
		คลองหัวลำภูหน้าประตูระบายน้ำก่อนไหลลงสู่ทะเลประมาณ 50 เมตร	
6	2208-WS0319 (1/5)	ครั้งที่ 1	34.0
7	2208-WS0319 (2/5)	ครั้งที่ 2	37.6
8	2208-WS0319 (3/5)	ครั้งที่ 3	32.4
9	2208-WS0319 (4/5)	ครั้งที่ 4	38.2
10	2208-WS0319 (5/5)	ครั้งที่ 5	29.0

**Remarks :** จุดระบายน้ำทิ้งริมถนนสุขุมวิทบริเวณ กม. ที่ 34 (Mixing Zone) = 47P 0676018 UTM 1496901  
คลองหัวลำภูหน้าประตูระบายน้ำก่อนไหลลงสู่ทะเลประมาณ 50 เมตร = 47P 0675668 UTM 1496307  
**Method :** SS - Volumetric, Dried at 103-105 °C (SM 2540 F)  
SM = Standard Method for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23<sup>rd</sup> Edition, 2017

Ms. Wareenut Prachumdaeng

Chief of Laboratory

15.09.22



Mrs. Pornpip Pethshee

Laboratory Manager

15.09.22

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## TEST REPORT

Analysis No. : R22-2882

Received Date : 11/10/22

Customer : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

Address : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

Contact : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

Report Date : 18/10/22

Analysis Date : 10/10-18/11/22

Job No. : S650347/Oct

Sampling Date : 10/10/22

Sampling By : TET

Type of Sample : Seawater

Sample Conditions : 2210-WS0309 = brown turbid/high black sediment, Oil & Grease = not visible

2210-WS0310 = yellow turbid/high yellow sediment, Oil & Grease = not visible

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2210-WS0309	2210-WS0310		
				จุดระบายน้ำทิ้ง ริมถนนสุขุมวิท บริเวณ กม. ที่ 34 (Mixing Zone)	คลองห้วยลำภูหน้า ประตูระบายน้ำ ก่อนไหลลงสู่ทะเล ประมาณ 50 เมตร		
1	pH	-	Electrometric Method (SM 4500 B)	7.30	7.49	7.0-8.5	10/10/22
2	SS	mg/L	Volumetric, Dried at 103-105 °C (SM 2540 F)	4.4	39.8	(1)	14/10/22
3	TDS	mg/L	Dried at 180 °C (SM 2540 C)	1,716	1,850	-	14/10/22
4	BOD	mg/L	5-Days BOD Test, Azide Modification Method (SM 5210 B)	1	2	-	12-17/10/22
5	Oil & Grease	mg/L	Liquid-Liquid, Partition Gravimetric Method (SM 5520 B)	0.8	0.7	not visible	17/10/22
6	NH <sub>3</sub> -N	µg-N/L	Distillation/Titrimetric Method (SM 4500-NH <sub>3</sub> C)	180	2,050	-	14/10/22
7	Phosphate	µg/L	Acid digestion/Colorimetric (SM 4500-P B/E)	4,790	3,690	-	18/10/22
8	Cyanide	µg/L	Distillation, Colorimetric Method (SM 4500-CN <sup>-</sup> B/E)	< 1	53	7	17/10/22
9	Phenol	mg/L	Distillation, Direct Photometric Method (SM 5530 D)	< 0.001	< 0.001	0.03	14/10/22
10	Cr <sup>+6</sup>	µg/L	Digestion, Electrothermal AAS Method (SM 3030E and 3113B)	< 1.0	< 1.0	50	17/10/22
11	Pb	µg/L	Digestion, Electrothermal AAS Method (SM 3030E and 3113B)	< 1.0	< 1.0	8.5	11/10/22
12	Cd	µg/L	Digestion, Electrothermal AAS Method (SM 3030E and 3113B)	< 1.0	< 1.0	5	11/10/22
13	Ni	µg/L	Digestion, Electrothermal AAS Method (SM 3030E and 3113B)	64.6	65.7	-	18/10/22
14	Total Cr	µg/L	Digestion, Electrothermal AAS Method (SM 3030E and 3113B)	< 1.0	< 1.0	100	17/10/22
15	Cu	µg/L	Digestion, Electrothermal AAS Method (SM 3030E and 3113B)	12.9	11.1	8	17/10/22
16	Hg *	µg/L	Cold-Vapor Fluorescence Method	0.36	0.44	0.1	18/11/22
17	As	µg/L	Digestion, Continuous Hydride generation/AAS Method (SM 3114C)	3.8	4.2	10	14/10/22
18	Zn	µg/L	Solvent Extraction, ICP <sup>(B)</sup>	80	< 20	50	14/10/22

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## TEST REPORT

**Analysis No.** : R22-2882  
**Received Date** : 11/10/22  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact** : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Report Date** : 18/10/22  
**Analysis Date** : 10-28/10/22  
**Job No.** : S650347/Oct  
**Sampling Date** : 10/10/22  
**Sampling By** : TET  
**Type of Sample** : Seawater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2210-WS0309	2210-WS0310		
				จุดระบายน้ำทิ้งริมถนนสุขุมวิทบริเวณกม. ที่ 34 (Mixing Zone)	คลองหัวลำภูหน้าประตูระบายน้ำก่อนไหลลงสู่ทะเลประมาณ 50 เมตร		
19	Organochlorine						
	- Alpha-BHC	µg/L	LLE, GC/ECD (SM 6630 B)	Not Detected	Not Detected	-	11-14/10/22
	- Beta-BHC	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- Gamma-BHC (Lindane)	µg/L		Not Detected	Not Detected	0.16	11-14/10/22
	- Heptachlor	µg/L		Not Detected	Not Detected	0.0036	11-14/10/22
	- Aldrin	µg/L		Not Detected	Not Detected	1.3	11-14/10/22
	- Dicofol	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- Heptachlor-exo-epoxide (cis-isomer B)	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- Heptachlor-endo-epoxide (trans-isomer A)	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- Gamma-Chlordane	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- o,p'-DDE	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- Alpha Endosulfan	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- Alpha-Chlordane	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- Dieldrin	µg/L		Not Detected	Not Detected	0.0019	11-14/10/22
	- p,p'-DDE	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- o,p'-DDD	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- Endrin	µg/L		Not Detected	Not Detected	0.0023	11-14/10/22
	- Beta Endosulfan	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- p,p'-DDD	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- o,p'-DDT	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- p,p'-DDT	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- Endosulfan sulfate	µg/L		Not Detected	Not Detected	-	11-14/10/22
20	Carbamate *						
	- Carbaryl	µg/L	In-house method TE-CH-207 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23rd Edition 2017, Part 6410B, 6610B, 6630B and 6630C by LC-MS Technique.	Not Detected	Not Detected	can not found	19-28/10/22
	- Isoproc carb	µg/L		Not Detected	Not Detected	-	19-28/10/22
	- Fenobucarb	µg/L		Not Detected	Not Detected	-	19-28/10/22
	- Promecarb	µg/L		Not Detected	Not Detected	-	19-28/10/22
	- Carbofuran	µg/L		Not Detected	Not Detected	-	19-28/10/22
	- Methiocarb	µg/L		Not Detected	Not Detected	-	19-28/10/22
	- Methomyl	µg/L		Not Detected	Not Detected	-	19-28/10/22
	- Aldicarb	µg/L		Not Detected	Not Detected	-	19-28/10/22
	- Oxamyl	µg/L		Not Detected	Not Detected	-	19-28/10/22
	- Metolcarb	µg/L		Not Detected	Not Detected	-	19-28/10/22
21	Organophosphate						
	- DDVP	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	-	11-18/10/22
	- Mevinphos	µg/L		Not Detected	Not Detected	-	11-18/10/22
	- Diazinon	µg/L		Not Detected	Not Detected	-	11-18/10/22
	- Dicrotophos	µg/L		Not Detected	Not Detected	-	11-18/10/22
	- Monocrotophos	µg/L		Not Detected	Not Detected	-	11-18/10/22
	- Dimethoate	µg/L		Not Detected	Not Detected	-	11-18/10/22

continue

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## TEST REPORT

**Analysis No.** : R22-2882  
**Received Date** : 11/10/22  
**Customer** : Technical Division of Thai Environmental Technic Limited  
For นิคมอุตสาหกรรมบางปู  
**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่  
อำเภอเมือง จังหวัดสมุทรปราการ 10280  
**Contact** : Tel. (02) 324 0358, 709 3450 Fax. (02) 323 0730

**Report Date** : 18/10/22  
**Analysis Date** : 10-18/10/22  
**Job No.** : S650347/Oct  
**Sampling Date** : 10/10/22  
**Sampling By** : TET  
**Type of Sample** : Seawater

Item	Parameter	Unit	Method <sup>(A)</sup>	Result		Standard	Analysis Date
				2210-WS0309	2210-WS0310		
				จุดระบายน้ำทิ้งริมถนนสุขุมวิทบริเวณกม. ที่ 34 (Mixing Zone)	คลองหัวลำภูหน้าประตูระบายน้ำก่อนไหลลงสู่ทะเลประมาณ 50 เมตร		
22	- Pirimiphos-methyl	µg/L	LLE, GC/MS (SW846 Method 3510C and 8270D) <sup>(C)</sup>	Not Detected	Not Detected	-	11-18/10/22
	- Chlorpyrifos	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Parathion-methyl	µg/L		Not Detected	Not Detected	-	11-18/10/22
	- Pirimiphos-ethyl	µg/L		Not Detected	Not Detected	-	11-18/10/22
	- Malathion	µg/L		Not Detected	Not Detected	can not found	11-18/10/22
	- Fenitrothion	µg/L		Not Detected	Not Detected	-	11-18/10/22
	- Parathion ethyl	µg/L		Not Detected	Not Detected	-	11-18/10/22
	- Prothiofos	µg/L		Not Detected	Not Detected	-	11-18/10/22
	- Methidathion	µg/L		Not Detected	Not Detected	-	11-18/10/22
	- Profenofos	µg/L		Not Detected	Not Detected	-	11-18/10/22
	- Ethion	µg/L		Not Detected	Not Detected	-	11-18/10/22
	- Triazophos	µg/L		Not Detected	Not Detected	-	11-18/10/22
	- EPN	µg/L		Not Detected	Not Detected	-	11-18/10/22
	- Phosalone	µg/L		Not Detected	Not Detected	-	11-18/10/22
	- Azinphos-ethyl	µg/L		Not Detected	Not Detected	-	11-18/10/22
	- Pyrethroid						
	- Deltamethrin	µg/L	LLE, GC/ECD (SW-846 Method 3510C and 8081B) <sup>(C)</sup>	Not Detected	Not Detected	-	11-14/10/22
	- Bifenthrin	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- Phenothrin	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- Lambda-Cyhalothrin	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- Cypermethrin	µg/L		Not Detected	Not Detected	can not found	11-14/10/22
	- Cyfluthrin	µg/L		Not Detected	Not Detected	-	11-14/10/22
	- Fenvalerate	µg/L		Not Detected	Not Detected	-	11-14/10/22

**Remarks** \*

Subcontractor

จุดระบายน้ำทิ้งริมถนนสุขุมวิทบริเวณ กม. ที่ 34 (Mixing Zone) = 47P 0676017 UTM 1496895

คลองหัวลำภูหน้าประตูระบายน้ำก่อนไหลลงสู่ทะเลประมาณ 50 เมตร = 47P 0675656 UTM 1496303

(1) สารแขวนลอย (Suspended Solids) มีค่าเปลี่ยนแปลงเพิ่มขึ้นไม่เกินผลรวมของค่าเฉลี่ย 1 วัน หรือ 1 เดือน หรือ 1 ปี บวกกับค่าเบี่ยงเบนมาตรฐานของค่าเฉลี่ยนั้น ๆ โดยค่าเฉลี่ย 1 วัน ให้วัดทุกชั่วโมง หรืออย่างน้อย 5 ครั้ง ในช่วงเวลาเท่า ๆ กัน ค่าเฉลี่ย 1 เดือน ให้วัดทุกวันหรืออย่างน้อย 4 ครั้ง ในช่วงเวลาเท่า ๆ กัน ใน 1 เดือน ณ เวลาเดียวกัน และค่าเฉลี่ย 1 ปี ให้วัดทุกเดือน ณ วันที่และเวลาเดียวกัน

**Method**

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

(B) Methods of Seawater Analysis edited by K. Grasshoff Kremling, M. Ehrhardt third, Completely Revised and Extended Edition

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

**Standard**

Notification of the National Environment Board (2021) (B.E. 2564) ; Class 5

Ms. Wareerut Prachumdaeng

Chief of Laboratory

18/10/22

Mrs. Pornpip Pethshee

Laboratory Manager

18/10/22







## TEST REPORT

**Analysis No.** : R22-2882

**Received Date** : 11/10/22

**Customer** : Technical Division of Thai Environmental Technic Limited

For นิคมอุตสาหกรรมบางปู

**Address** : 649 หมู่ 4 ถนนสุขุมวิท ตำบลบางปูใหม่

อำเภอเมือง จังหวัดสมุทรปราการ 10280

**Contact** : Tel. (02) 324 0358, 709 3450

Fax. (02) 323 0730

**Sample Conditions** : 2210-WS0309 (1/5) - 2210-WS0309 (5/5) = brown turbid/high black sediment

2210-WS0310 (1/5) - 2210-WS0310 (5/5) = yellow turbid/high yellow sediment

**Report Date** : 18/10/22

**Analysis Date** : 14/10/22

**Job No.** : S650347/Oct

**Sampling Date** : 10/10/22

**Sampling By** : TET

**Type of Sample** : Seawater

Item	Sample No.	Sampling Point	Result	Analysis Date
			SS (mg/L)	
		จุดระบายน้ำทิ้งริมถนนสุขุมวิทบริเวณ กม. ที่ 34 (Mixing Zone)		
1	2210-WS0309 (1/5)	ครั้งที่ 1	4.7	14/10/22
2	2210-WS0309 (2/5)	ครั้งที่ 2	4.8	14/10/22
3	2210-WS0309 (3/5)	ครั้งที่ 3	4.1	14/10/22
4	2210-WS0309 (4/5)	ครั้งที่ 4	4.2	14/10/22
5	2210-WS0309 (5/5)	ครั้งที่ 5	4.5	14/10/22
		คลองหัวลำภูหน้าประตูระบายน้ำก่อนไหลลงสู่ทะเลประมาณ 50 เมตร		
6	2210-WS0310 (1/5)	ครั้งที่ 1	42.3	14/10/22
7	2210-WS0310 (2/5)	ครั้งที่ 2	39.2	14/10/22
8	2210-WS0310 (3/5)	ครั้งที่ 3	42.6	14/10/22
9	2210-WS0310 (4/5)	ครั้งที่ 4	39.4	14/10/22
10	2210-WS0310 (5/5)	ครั้งที่ 5	40.4	14/10/22

**Remarks** : จุดระบายน้ำทิ้งริมถนนสุขุมวิทบริเวณ กม. ที่ 34 (Mixing Zone) = 47P 0676017 UTM 1496895

: คลองหัวลำภูหน้าประตูระบายน้ำก่อนไหลลงสู่ทะเลประมาณ 50 เมตร = 47P 0675656 UTM 1496303

**Method** : SS - Volumetric, Dried at 103-105 °C (SM 2540 F)

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

Ms. Wareerut Prachumdaeng

Chief of Laboratory

18/10/22



Mrs. Pornpip Pethshee

Laboratory Manager

18/10/22

..... END OF REPORT .....

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