

ภาคผนวก ง

หนังสือรับรองผลการตรวจวัดคุณภาพสิ่งแวดล้อม

ภาคผนวก ง-1

ผลการตรวจวิเคราะห์คุณภาพน้ำเสีย-น้ำทิ้ง โดย
ห้องปฏิบัติการ

ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUAI KHANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : pruchaya.p@singhastate.co.th
SAMPLING SOURCE : SINGHA COMPLEX BUILDING
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : JANUARY 27, 2023
SAMPLING TIME : 13:25 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR WEERAT NOKKAEW
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : JANUARY 27, 2023
ANALYTICAL DATE : JANUARY 27-FEBRUARY 3, 2023
REPORT NO. : 2023-000598
WORK NO. : 2023-000594
ANALYSIS NO. : T2304978-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM 4500-H F)	8.1 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM 4500-O G AND 5210 B)	294	≤ 20	20
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM 2540 D)	238	≤ 30	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	IN-HOUSE METHOD: UAE/TP/WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM 2540 C	464	500*	25
SETTLABLE SOLIDS ^c	mL/L	IMHOFF CONE (SM 2540 F)	24.0	≤ 0.5	0.1
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM 4500-S ² F)	< 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE/TP/WAS.001 (KJELDAHL METHOD); SM 4500-Norg C	215	≤ 35	1.5
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID PARTITION-GRAVIMETRIC METHOD (SM 5520 B)	4	≤ 20	3

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PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM 9221 B)	>160,000	-	18
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM 9221 E)	>160,000	-	18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT					
			YELLOW/TURBID YELLOW		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)
^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)
^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.
 SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 122, PART 125 D, DATED DECEMBER 28, 2005 AND VOL. 98 SPECIAL PART 171 D, DATED JULY 21, 2022.

500* : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED
 (TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1000 mg/L).

Pyapal S.
 (MISS PYPAPAT SUTTAMANUTWONG)
 LABORATORY SUPERVISOR

FEBRUARY 9, 2023

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United Analyst and Engineering Consultant Co., Ltd.
3 Soi Udomsuk 41, Sukhumvit Road, Bangkok, Phrakhanong, Bangkok 10260
Tel.0 2763 2828 Fax 0 2763 2800 www.laeconsultant.com E-mail: lae@laeconsultant.com

ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUA KHUANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : pruchaya.p@singhaestate.co.th
SAMPLING SOURCE : SINGHA COMPLEX BUILDING
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : JANUARY 27, 2023
SAMPLING TIME : 12:55 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR WEERAYUT MOKKAEW
ANALYZED BY : MISS ANONRAT PUTTALEE

RECEIVED DATE : JANUARY 27, 2023
ANALYTICAL DATE : JANUARY 27/FEBRUARY 3, 2023
REPORT NO. : 2023-U008890
WORK NO. : 2023-000594
ANALYSIS NO. : T23AB478-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT EFFLUENT T23AB478-0003	REGULATORY STANDARD	DETECTION LIMIT
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM 4500-H ⁺ B)	3.3 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM 4500-O ₂ G AND 5210 B)	2.5	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	28.5	≤ 30	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	IN-HOUSE METHOD: LAE TP-WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103- 105 °C); SM 2540 C	689	500 ^c	25
SETTLABLE SOLIDS ^c	mL/L	IM-HOFF CONE (SM: 2540 F)	< 0.1	≤ 0.5	0.1
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM: 4500-S ²⁻ F)	< 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: LAE TP-WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	< LOQ	≤ 35	15
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3

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3 Soi Udomsuk 41, Sukhumvit Road, Bangkok, Phrakhanong, Bangkok 10260
Tel.0 2763 2828 Fax 0 2763 2800 www.laeconsultant.com E-mail: lae@laeconsultant.com

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT EFFLUENT T23AB478-0003	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	490	-	18
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	330	-	18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 122.

PART 125 D, DATED DECEMBER 29, 2005 AND VOL. 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

500^c : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED

(TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1000 mg/L)

ND : NON-DETECTABLE.

< LOQ : < LIMIT OF QUANTITATION (TOTAL KJELDAHL NITROGEN ≥ 15 AND < 5.0 mg/L).

Piyapol S.
(MIS SYRAT SUTTANANTUWONG)
LABORATORY SUPERVISOR

FEBRUARY 9, 2023

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2023-U008890



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3 Soi Udomsuk 41, Sukhumvit Road, Bangkok, Phrakhanong, Bangkok 10260
Tel.0 2763 2828 Fax.0 2763 2800 www.uaconsultant.com E-mail:uae@uaconsultant.com

NSC-TISI-TIS 17025
TESTING 0207

ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUAJI KHANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : pruchaya.p@singhaestate.co.th
SAMPLING SOURCE : SINGHA COMPLEX BUILDING
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : JANUARY 27, 2023
SAMPLING TIME : 12:45 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR. WEERAVUT MOKKAEW
ANALYZED BY : MISS AMONRAI PUTTALEE

RECEIVED DATE : JANUARY 27, 2023
ANALYTICAL DATE : JANUARY 27, FEBRUARY 3, 2023
REPORT NO. : 2023-1008889
WORK NO. : 2023-000594
ANALYSIS NO. : T23AB47B-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT ค่าที่ตรวจพบ ที่ฐานข้อมูล T23AB47B-0002	REGULATORY STANDARD	DETECTION LIMIT
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM 4500-H B)	3.4 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM 4500-O G AND 5210 B)	5.3	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM 2540 D)	28.3	≤ 30	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	IN-HOUSE METHOD: LAETP.WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103- 105 °C); SM 2540 C	598	500*	25
SETTLABLE SOLIDS ^c	mL/L	IMHOFF CONE (SM 2540 F)	< 0.1	≤ 0.5	0.1
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM 4500-S ² -F)	< 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: LAETP.WAS.001 (KJELDAHL METHOD); SM 4500-Norg C	< LOQ	≤ 35	15
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM 5520 B)	ND	≤ 20	3

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3 Soi Udomsuk 41, Sukhumvit Road, Bangkok, Phrakhanong, Bangkok 10260
Tel.0 2763 2828 Fax.0 2763 2800 www.uaconsultant.com E-mail:uae@uaconsultant.com

NSC-TISI-TIS 17025
TESTING 0207

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT ค่าที่ตรวจพบ ที่ฐานข้อมูล T23AB47B-0002	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM 9221 B)	460	-	18
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM 9221 E)	330	-	18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)
b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)
c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.
SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 122,
PART 125 D, DATED DECEMBER 28, 2005 AND VOL. 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

500* : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED
(TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1000 mg/L).

ND : NON-DETECTABLE

< LOQ : LIMIT OF QUANTITATION (TOTAL KJELDAHL NITROGEN ≥ 15 AND < 5.0 mg/L).

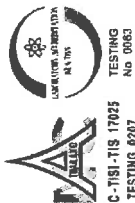
Piyapol S.
(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

FEBRUARY 9, 2023

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350 Udomsuk 41, Sukhumvit Road, Bangkok, Phrakhanong, Bangkok 10260
Tel.0 2763 2828 Fax.0 2763 2800 www.uaecconsultant.com E-mail:uae@uaecconsultant.com

NSC-1191-119 17025
TESTING
No. 0063

ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUAJ KIWANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : pruchaya.p@singhaestate.co.th
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : FEBRUARY 21, 2023
SAMPLING TIME : 14:00 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR WEERAYUT WOKKAEV
ANALYZED BY : MISS ANONIRAT PUTTALAE

RECEIVED DATE : FEBRUARY 21, 2023
ANALYTICAL DATE : FEBRUARY 21-28, 2023
REPORT NO. : 2023-U015019
WORK NO. : 2023-000594
ANALYSIS NO. : T23A0064-0001

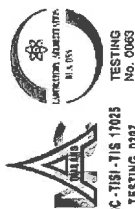
PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT ค่าเฉลี่ย T23A0064-0001	REGULATORY STANDARD	DETECTION LIMIT
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM PART 4500-H ⁺ B)	7.4 (27°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM PART 4500-O ₂ G AND PART 5210 B)	118	≤ 20	20
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM PART 2540 D)	195	≤ 30	50
TOTAL DISSOLVED SOLIDS ^b	mg/L	IN-HOUSE METHOD: LAE-TP-WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103- 105 °C); SM PART 2540 C	408	500 ^c	25
SETTLABLE SOLIDS ^c	mL/L	IMHOFF CONE (SM PART 2540 F)	20.0	≤ 0.5	0.1
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM PART 4500 -S ²⁻ F)	< 0.50	≤ 1.0	0.50
TOTAL KjELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: LAE-TP-WAS.001 (KJELDAHL METHOD); SM PART 4500-Norg C	83.8	≤ 35	15
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM PART 5520 B)	4	≤ 20	3

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BY ISO GROUP (THAILAND) CO., LTD.



United Analyst and Engineering Consultant Co., Ltd.
350 Udomsuk 41, Sukhumvit Road, Bangkok, Phrakhanong, Bangkok 10260
Tel.0 2763 2828 Fax.0 2763 2800 www.uaecconsultant.com E-mail:uae@uaecconsultant.com

NSC-1191-119 17025
TESTING
No. 0063

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT ค่าเฉลี่ย T23A0064-0001	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 B)	> 160,000	-	18
FACIAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 E)	> 160,000	-	18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 122,
PART 125 D, DATED DECEMBER 29, 2005 AND VOL. 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

500^c : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED
(TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1000 mg/L).

Pyapal S.
(MRS PIYAPAT SUTTANANTWONG)
LABORATORY SUPERVISOR

MARCH 3, 2023

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ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUAJ KHWANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : pichaya.p@singhasatze.co.th
SAMPLING SOURCE : SINGHA COMPLEX BUILDING
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : FEBRUARY 21, 2023
SAMPLING TIME : 13:20 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR WEERAYUT HONGKAEW
ANALYZED BY : MISS AMONRAT PUTTALAE

RECEIVED DATE : FEBRUARY 21, 2023
ANALYTICAL DATE : FEBRUARY 21-28, 2023
REPORT NO. : 2023-U015021
WORK NO. : 2023-000594
ANALYSIS NO. : T23AD064-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		DETECTION LIMIT
			EFFLUENT	REGULATORY STANDARD	
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM PART 4500-H ⁺ B)	4.6 (20°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM PART 4500-O ₂ G AND PART 5210 B)	5.2	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM PART 2540 D)	10.3	≤ 30	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	IN-HOUSE METHOD: LAETPWAD007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM PART 2540 C	566	500 ^c	25
SETTLABLE SOLIDS ^c	mL/L	IMHOFF CONE (SM PART 2540 F)	< 0.1	≤ 0.5	0.1
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM PART 4500-S ²⁻ F)	< 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: LAETPWAS001 (KJELDAHL METHOD); SM PART 4500-Norg ^c	< LOQ	≤ 35	15
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM PART 5520 B)	ND	≤ 20	3

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		DETECTION LIMIT
			EFFLUENT	REGULATORY STANDARD	
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 B)	240	-	15
FACCOL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 E)	150	-	15
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)
^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)
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SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

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500^c : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED
 (TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1000 mg/L).

ND : NON-DETECTABLE

< LOQ : LIMIT OF QUANTIFICATION (TOTAL KJELDAHL NITROGEN ≥ 15 AND < 5.0 mg/L).

Piyapol S.
 (MRS PIYAPAT SUTTANANTWONG)
 LABORATORY SUPERVISOR

MARCH 1, 2023

ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUA KHANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : pruchaya.p@singhaestate.co.th
SAMPLING SOURCE : SINGHA COMPLEX BUILDING
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : FEBRUARY 21, 2023
SAMPLING TIME : 13:35 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR WEERAYUT NOKKAEW
ANALYZED BY : MISS ANONRAT PUTTAAEE

RECEIVED DATE : FEBRUARY 21, 2023
ANALYTICAL DATE : FEBRUARY 21-28, 2023
REPORT NO. : 2023-U015020
WORK NO. : 2023-000594
ANALYSIS NO. : T23A0064-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT ค่ามาตรฐาน T23A0064-0002	REGULATORY STANDARD	DETECTION LIMIT
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	5.2 (29°C)	5-9	-
BIO-CHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 4500-O ₂ G AND PART 5210 B)	3.2	≤ 20	20
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	13.6	≤ 30	50
TOTAL DISSOLVED SOLIDS ^b	mg/L	IN-HOUSE METHOD: UAE-TP-WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103- 105 °C); SM: PART 2540 C	551	500 ^c	25
SETTLABLE SOLIDS ^c	mL/L	IMHOFF CONE (SM: PART 2540 F)	≤ 0.1	≤ 0.5	0.1
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM: PART 4500 -S ²⁻ F)	≤ 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE-TP-WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	6.2	≤ 35	1.5
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3

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• THIS ANALYSIS REPORT APPROVES ONLY FOR SUBMITTED SAMPLES.



United Analyst and Engineering Consultant Co., Ltd.

3 Soi Udomsuk 41, Sukhumvit Road, Bangkok, Phrakhanong, Bangkok 10260
Tel.0 2763 2828 Fax.0 2763 2800 www.uaeconsultant.com E-mail: uaec@uaeconsultant.com

TESTING
No. 0053

NSC-TISI-TIS 17025
TESTING 0107

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT ค่ามาตรฐาน T23A0064-0002	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE PERMENTATION TECHNIQUE (SM: PART 9221 B)	1,100	-	18
Faecal COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE PERMENTATION TECHNIQUE (SM: PART 9221 E)	220	-	18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT					
			YELLOW/TURBID BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OF MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT. PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 122.

PART 125 D, DATED DECEMBER 28, 2005 AND VOL. 99 SPECIAL PART 171 D, DATED JULY 21 2022.

: PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED

ND : (TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1000 mg/L).

: NON-DETECTABLE.

Prasert S.
(MRS PIYAPAT SUTTAMANTUWONG)
LABORATORY SUPERVISOR

MARCH 3, 2023

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2023-U015020

ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUAL KHUANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : pruchaya.p@singhadate.co.th
SAMPLING SOURCE : SINGHA COMPLEX BUILDING
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : MARCH 22, 2023
SAMPLING TIME : 12:00 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR. ACHTA SAENGAN
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : MARCH 22, 2023
ANALYTICAL DATE : MARCH 22-31, 2023
REPORT NO. : 2023-U023894
WORK NO. : 2023-000594
ANALYSIS NO. : T23AF102-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT ผลการตรวจพบ T23AF102-0001	REGULATORY STANDARD	DETECTION LIMIT
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM PART 4500-H ⁺ B)	8.4 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM PART 5210 B AND PART 4500-O ₂ G)	228	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM PART 2540 D)	379	≤ 30	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	IN-HOUSE METHOD: UAE TP-WAO 007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM PART 2540 C	415	500 ^d	25
SETTLABLE SOLIDS ^c	mL/L	IMHOFF CONE (SM PART 2540 F)	30.0	≤ 0.5	0.1
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM PART 4500 I-S ²⁻ F)	< 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE TP-WAS 001 (KJELDAHL METHOD); SM PART 4500-NH ₄ G	112	≤ 35	1.5
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM PART 5520 B)	6	≤ 20	3

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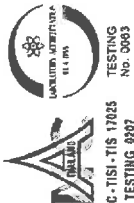
PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT ผลการตรวจพบ T23AF102-0001	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 B)	>180,000	-	18
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 E)	>180,000	-	18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

* : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)
 * : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)
 * : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED
 IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.
 SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.
 REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 82, PART 125 D, DATED DECEMBER 26, 2005 AND VOL. 139 SPECIAL PART 171 D, DATED JULY 21, 2022.
 500^d : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED (TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1,000 mg/L).


 (NMS RYANAT SUTTANANTHONG)
 LABORATORY SUPERVISOR

APRIL 4, 2023

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350i Udomsuk 41, Sukhumvit Road, Bangkok, Phrakhanong, Bangkok 10260
Tel: 02 2763 2828 Fax: 02 2763 2800 www.uaecconsultant.com E-mail: uaec@uaecconsultant.com

TESTING
No. 0093

ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUA KHANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : prachaya.in@singhaestate.co.th
SAMPLING SOURCE : SINGHA COMPLEX BUILDING
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : MARCH 22, 2023
SAMPLING TIME : 11:20 HOUR
SAMPLING METHOD : MR. ACHITA SAENGJIAN
SAMPLING BY : MISS AKSARIN BUNKING
ANALYZED BY : MISS AKSARIN BUNKING
RECEIVED DATE : MARCH 22, 2023
ANALYTICAL DATE : MARCH 22-31, 2023
REPORT NO. : 2023-U023896
WORK NO. : 2023-000594
ANALYSIS NO. : T23AF102-0003

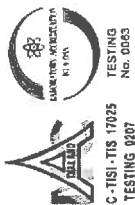
PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT EFFLUENT T23AF102-0003	REGULATORY STANDARD	DETECTION LIMIT
pH ^c		ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	5.7 (30°C)	5-9	
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O ₂ G)	13.8	≤ 20	20
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	57.2	≤ 30	50
TOTAL DISSOLVED SOLIDS ^b	mg/L	IN-HOUSE METHOD: UAE-TP-WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103- 105 °C); SM: PART 2540 C	530	500 ^d	25
SETTLABLE SOLIDS ^c	mL/L	IMHOFF CONE (SM: PART 2540 F)	0.2	≤ 0.5	0.1
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM: PART 4500 -S ²⁻ F)	< 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE-TP-WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	7.8	≤ 35	15
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3

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350i Udomsuk 41, Sukhumvit Road, Bangkok, Phrakhanong, Bangkok 10260
Tel: 02 2763 2828 Fax: 02 2763 2800 www.uaecconsultant.com E-mail: uaec@uaecconsultant.com

TESTING
No. 0093

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT EFFLUENT T23AF102-0003	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 5221 B)	92,000		18
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 5221 E)	17,000		18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 122.

PART 125 D, DATED DECEMBER 29, 2005 AND VOL. 09 SPECIAL PART 171 D, DATED JULY 21, 2022.

500^d : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED

(TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1000 mg/L).

ND : NON-DETECTABLE.

Papad S.
(MRS. PIYAPAT SUTTANANTWONG)
LABORATORY SUPERVISOR

APRIL 4, 2023

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2023-U023896

ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPT HUAI KHUANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : pruchaya.p@singhaestate.co.th
SAMPLING SOURCE : SINGHA COMPLEX BUILDING
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : MARCH 22, 2023
SAMPLING TIME : 11:40 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR. ACHITA SAENGAN
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : MARCH 22, 2023
ANALYTICAL DATE : MARCH 22-31, 2023
REPORT NO. : 2023-U023895
WORK NO. : 2023-000594
ANALYSIS NO. : T23AF102-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
pH ^c	-	ELECTROMETRIC METHOD AT SITE (SM PART 4500-H ⁺ B)	6.3 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM PART 5210 B AND PART 4500-O ₂ G)	13.2	≤ 20	20
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM PART 2540 D)	67.0	≤ 30	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	IN-HOUSE METHOD: LAETIPWAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM PART 2540 C	580	500 ^d	25
SETTLABLE SOLIDS ^c	mg/L	IMHOFF CONE (SM PART 2540 F)	< 0.1	≤ 0.5	0.1
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM PART 4500 -S ²⁻ F)	< 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: LAETIPWAS.001 (KJELDAHL METHOD); SM PART 4500-N _{org} C	6.7	≤ 35	1.5
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM PART 5520 B)	ND	≤ 20	3

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PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^a	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 B)	54,000		18
Faecal COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 E)	54,000		18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)
^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)
^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED
 IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.
 SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.
 REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 122, PART 125 D, DATED DECEMBER 28, 2005 AND VOL. 138 SPECIAL PART 171 D, DATED JULY 21, 2022.
 500^d : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED (TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1,000 mg/L).
 ND : NON-DETECTABLE


 (MRS. PIYAPAT SUTTAMANITWONG)
 LABORATORY SUPERVISOR

APRIL 4, 2023

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ANALYSIS REPORT

CUSTOMER NAME SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUA KHANG BANGKOK 10310
CONTACT INFORMATION TEL : 08 1560 5406 e-mail : puchaya.p@singhaestate.co.th
SAMPLING SOURCE SINGHA COMPLEX BUILDING
SAMPLE TYPE WASTEWATER
SAMPLING DATE APRIL 26, 2023
SAMPLING TIME 11:30 HOUR
SAMPLING METHOD GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY MR. ACHITA SAENGJIAN
ANALYZED BY MISS AKSARIN BUNKONG

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
pH ^c		ELECTROMETRIC METHOD AT SITE (SM PART 4500-H ⁺ B)	7.9 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM PART 5210 B AND PART 4500-O ₂ G)	345	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM PART 2540 D)	1,592	≤ 30	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	IN-HOUSE METHOD: UAE TP-WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM PART 2540 C	525	500 ^d	25
SETTLABLE SOLIDS ^c	mL	IMHOFF CONE (SM PART 2540 F)	40.0	≤ 0.5	0.1
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM PART 4500-S ⁻ F)	2.5	≤ 10	0.50
TOTAL KJELDAHL NITROGEN ^a	mg/L	IN-HOUSE METHOD: UAE TP-WAS.001 (KJELDAHL METHOD); SM PART 4500-Norg C	84	≤ 35	15
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM PART 5520 B)	17	≤ 20	3

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PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 B)	>180,000		18
Faecal COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 E)	>180,000		18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			BROWN/TURBID BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)
^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)
^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED
 IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.
 SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.
 REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 92, PART 125 D, DATED DECEMBER 29, 2005 AND VOL. 99 SPECIAL PART 171 D, DATED JULY 21, 2022
 PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED.

500^d

Piyapat S.
 (MRS PIYAPAT SUTTAMANTWONG)
 LABORATORY SUPERVISOR

MAY 15, 2023

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2023-U034781

United Analyst and Engineering Consultant Co., Ltd.
33 Sol Udomsuk 41, Sukhumvit Road, Bangkok, Phrakhanong, Bangkok 10260
Tel.0 2763 2828 Fax.0 2763 2800 www.uaeconsultant.com E-mail: uaec@uaeconsultant.com

TESTING
No. 0083

ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUAI KHUANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : pruchaya.p@singhaestate.co.th
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : APRIL 26, 2023
SAMPLING TIME : 11:10 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR. ACHITA SIENGJAN
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : APRIL 26, 2023
ANALYTICAL DATE : APRIL 26-MAY 11, 2023
REPORT NO. : 2023-U034783
WORK NO. : 2023-005594
ANALYSIS NO. : TZ3AH42-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT EFFLUENT TZ3AH42-0003	REGULATORY STANDARD	DETECTION LIMIT
pH ^c		ELECTROMETRIC METHOD AT SITE (SM PART 4500-H B)	3.8 (3°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM PART 5210 B AND PART 4500-O G)	4.3	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM PART 2540 D)	218	≤ 30	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	IN-HOUSE METHOD: UAE TP.WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103- 105 °C); SM: PART 2540 C	812	500*	25
SETTLABLE SOLIDS ^c	mL/L	IMHOFF CONE (SM PART 2540 F)	0.3	≤ 0.5	0.1
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM: PART 4500-S- F)	≤ 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	7.6	≤ 35	1.5
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3

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NO MODIFICATIONS
NO MODIFICATIONS
BY THE LABORATORY

United Analyst and Engineering Consultant Co., Ltd.
33 Sol Udomsuk 41, Sukhumvit Road, Bangkok, Phrakhanong, Bangkok 10260
Tel.0 2763 2828 Fax.0 2763 2800 www.uaeconsultant.com E-mail: uaec@uaeconsultant.com

TESTING
No. 0083

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT EFFLUENT TZ3AH42-0003	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 B)	35,000	-	18
Faecal COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 E)	4,900	-	18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 92.

PART 105 D, DATED DECEMBER 20, 2005 AND VOL. 139 SPECIAL PART 171 D, DATED JULY 21, 2022

: PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED.

500* : NON-DETECTABLE.

ND

Pyepel S.
(NHS. PIVAPAT SUTTANUTWONG)
LABORATORY SUPERVISOR

MAY 15, 2023

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NO MODIFICATIONS
NO MODIFICATIONS
BY THE LABORATORY

ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUAI KWANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : pruchayap@singhaestate.co.th
SAMPLING SOURCE : SINGHA COMPLEX BUILDING
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : APRIL 26, 2023
SAMPLING TIME : 10:50 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR. ACHITA SAENGJAN
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : APRIL 26, 2023
ANALYTICAL DATE : APRIL 26-MAY 11, 2023
REPORT NO. : 2023-U034782
WORK NO. : 2023-000594
ANALYSIS NO. : T23AH442-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
pH ^c		ELECTROMETRIC METHOD AT SITE (SM PART 4500-H ⁺ B)	5.0 (31°C)	6-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM PART 5210 B AND PART 4500-O G)	6.2	≤ 20	20
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM PART 2540 D)	23.7	≤ 30	50
TOTAL DISSOLVED SOLIDS ^b	mg/L	IN-HOUSE METHOD: LAE:TPWAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM PART 2540 C	624	500*	25
SETTLABLE SOLIDS ^c	mL/L	IMHOFF CONE (SM PART 2540 F)	< 0.1	≤ 0.5	0.1
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM PART 4500-S ⁻ F)	< 0.50	≤ 10	0.50
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: LAE:TPWAS.001 (KJELDAHL METHOD); SM PART 4500-Norg ^c	7.6	≤ 35	15
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM PART 5520 B)	ND	≤ 20	3

* : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)
* : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)
* : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED
IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.
SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.
REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE VOL. 122, PART 105 D, DATED DECEMBER 29, 2005 AND VOL. 139 SPECIAL PART 171D, DATED JULY 21, 2022
500* : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED
ND : NON DETECTABLE

ISO 17025:2015 CERTIFIED
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BY RS GROUP (THAILAND) CO., LTD.

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 B)	24,000		18
FACCAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 E)	4,900		18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

* : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)
* : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)
* : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED
IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.
SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.
REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE VOL. 122, PART 105 D, DATED DECEMBER 29, 2005 AND VOL. 139 SPECIAL PART 171D, DATED JULY 21, 2022
500* : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED
ND : NON DETECTABLE

ISO 17025:2015 CERTIFIED
ISO 17025:2015 CERTIFIED
BY RS GROUP (THAILAND) CO., LTD.

Pyapal S.
(MIS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

MAY 15, 2023

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ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUAI KHUANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : prachaya.p@singhaestate.co.th
SAMPLING SOURCE : SINGHA COMPLEX BUILDING
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : MAY 24, 2023
SAMPLING TIME : 12:00 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR. ANUSANT SUNDEE
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : MAY 24, 2023
ANALYTICAL DATE : MAY 24 - JUNE 1, 2023
REPORT NO. : 2023-U044108
WORK NO. : 2023-000594
ANALYSIS NO. : T23A559-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT T23A559-0001	REGULATORY STANDARD	DETECTION LIMIT
pH ^a		ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.6 (3 ^o C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O ₂ G)	152	≤ 20	20
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 ^o C (SM: PART 2540 D)	193	≤ 30	50
TOTAL DISSOLVED SOLIDS ^a	mg/L	IN-HOUSE METHOD: UAE:TP:WAO 007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 ^o C); SM: PART 2540 C	471	500 ^c	25
SETTLABLE SOLIDS ^c	mL/L	MHOFF CONE (SM: PART 2540 F)	10.0	≤ 0.5	0.1
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM: PART 4500-S _F F)	1.4	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE:TP:WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	122	≤ 35	15
FAT, OIL AND GREASE ^a	mg/L	LIQUID LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	7	≤ 20	3

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 BY SET GROUP (THAILAND) CO., LTD.

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT T23A559-0001	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B)	> 160,000	-	18
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	> 160,000	-	18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)
^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)
^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE VOL. 122, PART 125 D, DATED DECEMBER 29, 2005 AND VOL. 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED.

500^c


 (MRS PIYAPAP SUTTHAMANYONG)
 LABORATORY SUPERVISOR

JUNE 7, 2023

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 BY SET GROUP (THAILAND) CO., LTD.

ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUA KHUANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : prachaya.p@singhastate.co.th
SAMPLING SOURCE : SINGHA COMPLEX BUILDING
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : MAY 24, 2023
SAMPLING TIME : 11:30 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : MAY 24, 2023
ANALYTICAL DATE : MAY 24 - JUNE 1, 2023
REPORT NO. : 2023-U044110
WORK NO. : 2023-000554
ANALYSIS NO. : T23A-559-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT EFFLUENT T23A559-0003	REGULATORY STANDARD	DETECTION LIMIT
pH ^a		ELECTROMETRIC METHOD AT SITE (SM PART 4500-H ⁺ B)	6.8 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM PART 5210 B AND PART 4500-O ₂ G)	17.3	≤ 20	20
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM PART 2540 D)	64.5	≤ 30	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	IN-HOUSE METHOD: LAE.TP.WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C, SM PART 2540 C)	593	500 ^c	25
SETTLABLE SOLIDS ^c	mL/L	IMHOFF CONE (SM PART 2540 F)	< 0.1	≤ 0.5	0.1
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM PART 4500-S ²⁻ F)	< 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: LAE.TP.WAS.001 (KJELDAHL METHOD); SM PART 4500-Norg G	28.7	≤ 35	1.5
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM PART 5520 B)	ND	≤ 20	3

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PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT EFFLUENT T23A559-0003	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 B)	54,000		18
FACICAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 E)	14,000		18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 122.

PART 125 D, DATED DECEMBER 28, 2005 AND VOL. 139 SPECIAL PART 111 D, DATED JULY 21, 2022

: PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED.

500^c : NONDETECTABLE.

ND

Prapad S.
(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 7, 2023

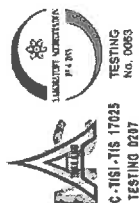
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2023-U044110



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3501 Udomsuk 41, Sukhumvit Road, Bangkok, Phrakhanong, Bangkok 10260
Tel.0 2763 2828 Fax.0 2763 2800 www.uaconsultant.com E-mail: ua@uaconsultant.com

TESTING
No. 0063

ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUA KHANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : puchaya.p@singhaestate.co.th
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : MAY 24, 2023
SAMPLING TIME : 11:40 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR. ANUSART SUAYDEE
ANALYZED BY : MISS AKSARIN BUNKONG

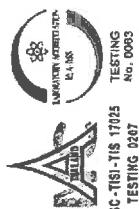
RECEIVED DATE : MAY 24, 2023
ANALYTICAL DATE : MAY 24 - JUNE 1, 2023
REPORT NO. : 2023-U044109
WORK NO. : 2023-000594
ANALYSIS NO. : T230559-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM PART 4500-H ⁺ B)	8.1 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM PART 5210 B AND PART 4500-O G)	17.7	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM PART 2540 D)	715	≤ 30	5.0
TOTAL DISSOLVED SOLIDS ^a	mg/L	IN-HOUSE METHOD: UAE.TP.WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C) SM PART 2540 C	515	500 ^c	25
SETTLABLE SOLIDS ^c	mg/L	IMHOFF CONE (SM PART 2540 F)	≤ 0.1	≤ 0.5	0.1
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM PART 4500-S ²⁻ F)	≤ 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD), SM PART 4500-Norg C	25.3	≤ 35	1.5
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM PART 5520 B)	ND	≤ 20	3

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3501 Udomsuk 41, Sukhumvit Road, Bangkok, Phrakhanong, Bangkok 10260
Tel.0 2763 2828 Fax.0 2763 2800 www.uaconsultant.com E-mail: ua@uaconsultant.com

TESTING
No. 0063

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 B)	35,000	-	18
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM PART 9221 E)	13,000	-	18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23RD EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE

MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 92,

PART 125 D, DATED DECEMBER 29, 2005 AND VOL. 93 SPECIAL PART 171 D, DATED JULY 21, 2022.

500^c : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED.

ND : NON-DETECTABLE

Piyapol S.
(MRS. PIYAPAT SUTTHANUTWONG)
LABORATORY SUPERVISOR

JUNE 7, 2023

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3 Soi Udomsuk 41, Sukhumvit Road, Bangkok, Phrakhanong, Bangkok 10260
Tel.0 2763 2828 Fax 0 2763 2800 www.uaeconsultant.com E-mail: uae@uaeconsultant.com

NSC-TISI-TIS 17025
TESTING
No. 0083

ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUAI KHUANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : pruchaya.p@singhaestate.co.th
SAMPLING SOURCE : SINGHA COMPLEX BUILDING
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : JUNE 21, 2023
SAMPLING TIME : 11:35 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 21, 2023
ANALYTICAL DATE : JUNE 21-29, 2023
REPORT NO. : 2023-U052839
WORK NO. : 2023-000594
ANALYSIS NO. : T23AL727-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT ผลการตรวจพบ T23AL727-0001	REGULATORY STANDARD	DETECTION LIMIT
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM, PART 4500-H ⁺ B)	7.4 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM, PART 5210 B AND PART 4500-O ₂ G)	453	≤ 20	2.0
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM, PART 2540 D)	884	≤ 30	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	IN-HOUSE METHOD: LAE TP WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103- 105 °C); SM, PART 2540 C	568	500*	25
SETTLABLE SOLIDS ^c	mL/L	IMF-OFF CONE (SM, PART 2540 F)	210	≤ 0.5	0.1
SULPHIDE ^c	mg/L	IODOMETRIC METHOD (SM, PART 4500-S ⁻ F)	5.4	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: LAE TP WAS.001 (KJELDAHL METHOD); SM, PART 4500-N _{org} C	150	≤ 35	15
FAT, OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM, PART 5520 B)	26	≤ 20	3

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ISO 14001:2015 CERTIFIED
BY SGS GROUP (THAILAND) CO., LTD.



United Analyst and Engineering Consultant Co., Ltd.
3 Soi Udomsuk 41, Sukhumvit Road, Bangkok, Phrakhanong, Bangkok 10260
Tel.0 2763 2828 Fax 0 2763 2800 www.uaeconsultant.com E-mail: uae@uaeconsultant.com

NSC-TISI-TIS 17025
TESTING
No. 0083

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT ผลการตรวจพบ T23AL727-0001	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM, PART 9221 B)	>160,000	-	18
FACCAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM, PART 9221 E)	>160,000	-	18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)
^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)
^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE
MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 122,
PART 128 D, DATED DECEMBER 28, 2005 AND VOL. 138 SPECIAL PART 171 D, DATED JULY 21, 2022.

500* : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED.

Report S.
(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

JUNE 30, 2023

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ISO 14001:2015 CERTIFIED
BY SGS GROUP (THAILAND) CO., LTD.

ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUAI KWANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : pruchayap@singhaestate.co.th
SAMPLING SOURCE : SINGHA COMPLEX BUILDING
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : JUNE 21, 2023
SAMPLING TIME : 11:20 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR. ANUSART SUAYDEE
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : JUNE 21, 2023
ANALYTICAL DATE : JUNE 21-29, 2023
REPORT NO. : 2023-U052842
WORK NO. : 2023-000594
ANALYSIS NO. : T23AL727-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT EFFLUENT T23AL727-0003	REGULATORY STANDARD	DETECTION LIMIT
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	6.8 (3°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	7.4	≤ 20	20
SUSPENDED SOLIDS ^a	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	14.0	≤ 30	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	IN-HOUSE METHOD: UAE:TP:WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM: PART 2540 C	558	500 ^c	25
SETTLABLE SOLIDS ^c	mg/L	IMHOFF CONE (SM: PART 2540 F)	< 0.1	≤ 0.5	0.1
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM: PART 4500-S ²⁻ F)	< 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE:TP:WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	23.0	≤ 35	15
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3

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 ISO 14001:2015 CERTIFIED
 BY BS GROUP (THAILAND) CO., LTD.

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT EFFLUENT T23AL727-0003	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B)	> 160,000	-	18
FACCAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	> 160,000	-	18
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)
^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)
^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 122, PART 125 D, DATED DECEMBER 28, 2005 AND VOL. 138 SPECIAL PART 171 D, DATED JULY 21, 2022.

500^c : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED.

ND : NON-DETECTABLE.

Pyapal S.
 (MRS. PYAPAT SUTTAMANTWONG)
 LABORATORY SUPERVISOR

JUNE 30, 2023

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2023-U052842

ANALYSIS REPORT

CUSTOMER NAME : SINGHA PROPERTY DEVELOPMENT CO., LTD.
ADDRESS : 1788 SINGHA COMPLEX, 15TH FLOOR NEW PHETCHABURI RD. BANG KAPI HUAI KHUANG BANGKOK 10310
CONTACT INFORMATION : TEL : 08 1560 5406 e-mail : pruchaya.p@singhaestate.co.th
SAMPLING SOURCE : SINGHA COMPLEX BUILDING
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : JUNE 21, 2023
SAMPLING TIME : 11:05 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS AKSARIN BUNKING

RECEIVED DATE : JUNE 21, 2023
ANALYTICAL DATE : JUNE 21-29, 2023
REPORT NO. : 2023-0052841
WORK NO. : 2023-000594
ANALYSIS NO. : T23AL727-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT ค่าวิเคราะห์ T23AL727-0002	REGULATORY STANDARD	DETECTION LIMIT
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM PART 4500-H ⁺ B)	5.9 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	MEMBRANE ELECTRODE METHOD (SM PART 5210 B AND PART 4500-O ₂ G)	ND	≤ 20	2.0
SUSPENDED SOLIDS ^c	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM PART 2540 D)	ND	≤ 30	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	IN-HOUSE METHOD: UAE-TP-WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM: PART 2540 C	797	500 ^d	25
SETTLABLE SOLIDS ^c	mL/L	IMHOFF CONE (SM PART 2540 F)	< 0.1	≤ 0.5	0.1
SULPHIDE ^b	mg/L	ICIDOMETRIC METHOD (SM PART 4500-S ² F)	< 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN ^b	mg/L	IN-HOUSE METHOD: UAE-TP-WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	< LOQ	≤ 35	15
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM PART 5520 B)	ND	≤ 20	3

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PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT ค่าวิเคราะห์ T23AL727-0002	REGULATORY STANDARD	DETECTION LIMIT
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B)	790	-	1.8
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	490	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN		

^a : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

^b : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23rd EDITION, 2017.

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS A, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL. 122, PART 128 D, DATED DECEMBER 29, 2005 AND VOL. 139 SPECIAL PART 171 D, DATED JULY 21, 2022.

500^d : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED.

ND : NON-DETECTABLE

< LOQ : < LIMIT OF QUANTIFICATION (TOTAL KJELDAHL NITROGEN ≥ 15 AND < 5.0 mg/L).

Report 8.

(MRS PIYAPAT SUTTANANUTWONG)
LABORATORY SUPERVISOR

JUNE 30, 2023

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2023-0052841

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ผลการตรวจวิเคราะห์คุณภาพน้ำหอฝิ่งเย็นโดยห้องปฏิบัติการ



บริษัท ศูนย์วิเคราะห์น้ำ จำกัด

WATER ANALYSIS CENTER COMPANY LIMITED

1/94 หมู่ 5 ต. คานหนาม อ. อุทัย จ. พระนครศรีอยุธยา 13210

1/94 Moo 5, T.Kanham, A.U-Thai, Ayutthaya 13210, Thailand

Tel : 035-226-383 , 035-800-593 Fax : 035-800-594



TESTING
No.0029

ANALYSIS REPORT

Page 1 of 1

Customer Name : บริษัท สิงห์ พร็อพเพอร์ตี้ ดีเวลลอปเม้นท์ จำกัด

Address : 1788 อาคารสิงห์ คอมเพล็กซ์ ชั้น 15 ถนนเพชรบุรีตัดใหม่ แขวงบางกะปิ เขตห้วยขวาง กรุงเทพมหานคร

Contact : คุณปรีชญา Phone : 081-5605406 E.mail : tum_3@hotmail.com

Sample Type : Water Sample Site# : โครงการ สิงห์ คอมเพล็กซ์ Sampling Method# : Grab

Sampling Date# : 29/05/2023 Sampling By# : WAC Receive Date : 30/05/2023

Analysis Date : 30/05/2023-13/06/2023 Report Date : 13/06/2023 Report No. : RWS 01889/66

Parameter	Unit	Method	PWS 03147/66 จุดที่น้ำไหลมาเต็มในระบบ	PWS 03148/66 ในอ่างรองรับน้ำ	PWS 03149/66 พอน้ำทิ้งจากท่อฝัังเป็น
pH	-	In-house method: TM 001	7.9 (25°C)	8.6 (25°C)	8.5 (25°C)
Total Plate Count	CFU/mL	Pour Plate Method	38 #	8.2 x 10 ³ #	3.2 x 10 ⁴ #
Legionella pneumophila	CFU/1000 mL	ISO 11731 : 2017	ตรวจไม่พบ** #	ตรวจไม่พบ** #	ตรวจไม่พบ** #

Sample Characterization Observation ใส ใส ใส

Remark : In-house method : TM 001 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd 2017, part 4500-H⁺B

* It is outside the scope of ISO/IEC 17025

** วิเคราะห์โดย บริษัท เคมีแล็บ เซอร์วิส (ประเทศไทย) จำกัด

-: End Of Report :-

Laboratory Staff

(Miss. Ronnakorn Padungwieng)

Chemist

Approved By

(Mrs. Neeramol Phadungsong)

General Manager

The results relate only to the items tested. Test report shall not be reproduced except in full, without written approval of the laboratory

FO.LAB 7.8.1/1 รายงานผลการทดสอบ

แก้ไขครั้งที่ 0, วันที่บังคับใช้ : 1 ม.ค. 2562 หน้า 1/1

