

## ANALYSIS REPORT

**CUSTOMER NAME** : THE RITZ-CARLTON RESIDENCES,BANGKOK  
**ADDRESS** : 114 NARADHIWAS RAJANAGARINDRA ROAD SI LOM BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhaw@ritzcarlton.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : JULY 19, 2024  
**SAMPLING TIME** : 1/  
**SAMPLING METHOD** : GRAB  
**SAMPLING BY** : MR SUKSAN BOONLEANG  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM  
**RECEIVED DATE** : JULY 19, 2024  
**ANALYTICAL DATE** : JULY 19-30, 2024  
**ISSUE DATE** : JULY 31, 2024  
**REPORT NO.** : 2024-U069808  
**WORK NO.** : 2023-007527  
**ANALYSIS NO.** : T24AQ490-0001 - T24AQ490-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 15:10 HOUR 1/ T24AQ490-0001	2 14:55 HOUR 1/ T24AQ490-0002		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H <sup>+</sup> B AND 1060 B	6.9 (31°C)	7.4 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	318	108	≤ 30	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	155	137	≤ 40	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM: PART 2540 C	453	353	500*	25
SETTLABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	3.5	9.0	≤ 0.5	0.1
SULPHIDE <sup>c</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sup>2-</sup> F)	3.3	< 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	54.3	37.3	≤ 35	1.5



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 15:10 HOUR 1/ T24AQ490-0001	2 14:55 HOUR 1/ T24AQ490-0002		
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	33	ND	≤ 20	3
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	GREY/TURBID GREY		

<sup>a</sup> : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

<sup>b</sup> : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

<sup>c</sup> : 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, 24<sup>th</sup> EDITION, 2023.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.

RESULT 1 : บ่อพักน้ำเสีย (EQUALIZATION TANK)

RESULT 2 : บ่อน้ำใส (EFFLUENT TANK)

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, 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\* : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED.

ND : NOT DETECTED.



## ANALYSIS REPORT

**CUSTOMER NAME** : THE RITZ-CARLTON RESIDENCES,BANGKOK  
**ADDRESS** : 114 NARADHIWAS RAJANAGARINDRA ROAD SI LOM BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhow@ritzcarlton.com  
**SAMPLING SOURCE** : THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : WATER SUPPLY  
**SAMPLING DATE** : JULY 19, 2024  
**SAMPLING TIME** : 14:50 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR SUKSAN BOONLEANG  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM  
**RECEIVED DATE** : JULY 19, 2024  
**ANALYTICAL DATE** : JULY 19-26, 2024  
**ISSUE DATE** : JULY 31, 2024  
**REPORT NO.** : 2024-U069809  
**WORK NO.** : 2023-007527  
**ANALYSIS NO.** : T24AQ490-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ก๊อกร้ำใช้ในโครงการ T24AQ490-0003		
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	204	≤ 1,000	25
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR -		

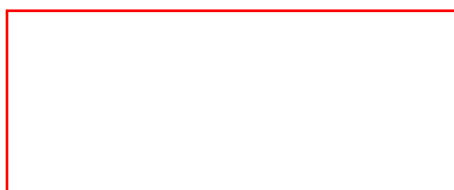
<sup>a</sup> : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

<sup>b</sup> : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

<sup>c</sup> : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.

REGULATORY STANDARD : CRITERIA OF WATER SUPPLY QUALITY, NOTIFICATION OF THE METROPOLITAN WATERWORKS AUTHORITY, B.E. 2565 (2022).

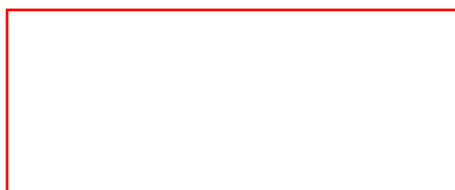


## ANALYSIS REPORT

**CUSTOMER NAME** : THE RITZ-CARLTON RESIDENCES,BANGKOK  
**ADDRESS** : 114 NARADHIWAS RAJANAGARINDRA ROAD SI LOM BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhow@ritzcarlton.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : SLURRY IN AERATION TANK  
**SAMPLING DATE** : JULY 19, 2024  
**SAMPLING TIME** : 15:15 HOUR  
**SAMPLING METHOD** : GRAB  
**SAMPLING BY** : MR SUKSAN BOONLEANG  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM  
**RECEIVED DATE** : JULY 19, 2024  
**ANALYTICAL DATE** : JULY 19-26, 2024  
**ISSUE DATE** : JULY 31, 2024  
**REPORT NO.** : 2024-U069810  
**WORK NO.** : 2023-007527  
**ANALYSIS NO.** : T24AQ490-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			AERATION TANK T24AQ490-0004	
pH	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500 -H <sup>+</sup> B AND 1060 B	7.5 (32°C)	-
DISSOLVED OXYGEN	mg/L	AZIDE MODIFICATION METHOD (AT SITE) SM: PART 4500-O C	1.5	0.5
MIXED LIQUOR SUSPENDED SOLIDS	mg/L	MIXED LIQUOR SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	682	5.0
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.





## ANALYSIS REPORT

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**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhaw@ritzcarlton.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : WASTEWATER **RECEIVED DATE** : AUGUST 23, 2024  
**SAMPLING DATE** : AUGUST 23, 2024 **ANALYTICAL DATE** : AUGUST 23-30, 2024  
**SAMPLING TIME** : 1/ **ISSUE DATE** : SEPTEMBER 2, 2024  
**SAMPLING METHOD** : GRAB **REPORT NO.** : 2024-U080654  
**SAMPLING BY** : MR SUKSAN BOONLEANG **WORK NO.** : 2023-007527  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM **ANALYSIS NO.** : T24AT379-0001 - T24AT379-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 15:30 HOUR 1/ T24AT379-0001	2 15:10 HOUR 1/ T24AT379-0002		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H <sup>+</sup> B AND 1060 B	7.0 (29°C)	7.2 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	1,821	14.6	≤ 30	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	3,594	30.0	≤ 40	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM: PART 2540 C	453	304	500*	25
SETTLEABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	200	0.1	≤ 0.5	0.1
SULPHIDE <sup>c</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sup>2-</sup> F)	10.0	< 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	226	36.7	≤ 35	1.5



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 15:30 HOUR I/ T24AT379-0001	2 15:10 HOUR I/ T24AT379-0002		
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	514	ND	≤ 20	3
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			BLACK/TURBID BLACK	YELLOW/TURBID BROWN		

<sup>a</sup> : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

<sup>b</sup> : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

<sup>c</sup> : 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, 24<sup>th</sup> EDITION, 2023.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.

RESULT 1 : บ่อพักน้ำเสีย (EQUALIZATION TANK)

RESULT 2 : บ่อน้ำใส (EFFLUENT TANK)

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, 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\* : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED.

BIOCHEMICAL OXYGEN DEMAND (T24AT379-0002) : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B,5(e).

ND : NOT DETECTED.



## ANALYSIS REPORT

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**ADDRESS** : 114 NARADHIWAS RAJANAGARINDRA ROAD SI LOM BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhow@ritzcarlton.com  
**SAMPLING SOURCE** : THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : WATER SUPPLY  
**SAMPLING DATE** : AUGUST 23, 2024  
**SAMPLING TIME** : 15:15 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR SUKSAN BOONLEANG  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM  
**RECEIVED DATE** : AUGUST 23, 2024  
**ANALYTICAL DATE** : AUGUST 23-28, 2024  
**ISSUE DATE** : SEPTEMBER 2, 2024  
**REPORT NO.** : 2024-U080655  
**WORK NO.** : 2023-007527  
**ANALYSIS NO.** : T24AT379-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ที่ออกใช้ในโครงการ T24AT379-0003		
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	176	≤ 1,000	25
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR -		

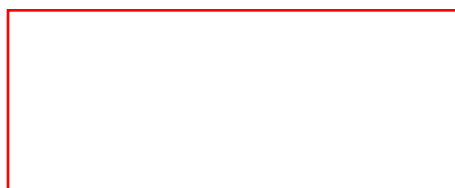
<sup>a</sup> : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

<sup>b</sup> : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

<sup>c</sup> : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.

REGULATORY STANDARD : CRITERIA OF WATER SUPPLY QUALITY, NOTIFICATION OF THE METROPOLITAN WATERWORKS AUTHORITY, B.E. 2565 (2022).



## ANALYSIS REPORT

**CUSTOMER NAME** : THE RITZ-CARLTON RESIDENCES,BANGKOK  
**ADDRESS** : 114 NARADHIWAS RAJANAGARINDRA ROAD SI LOM BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhow@ritzcarlton.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : SLURRY IN AERATION TANK  
**SAMPLING DATE** : AUGUST 23, 2024  
**SAMPLING TIME** : 15:20 HOUR  
**SAMPLING METHOD** : GRAB  
**SAMPLING BY** : MR SUKSAN BOONLEANG  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM  
**RECEIVED DATE** : AUGUST 23, 2024  
**ANALYTICAL DATE** : AUGUST 23-29, 2024  
**ISSUE DATE** : SEPTEMBER 2, 2024  
**REPORT NO.** : 2024-U080656  
**WORK NO.** : 2023-007527  
**ANALYSIS NO.** : T24AT379-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			AERATION TANK T24AT379-0004	
pH	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500 -H <sup>+</sup> B AND 1060 B	7.5 (33°C)	-
DISSOLVED OXYGEN	mg/L	AZIDE MODIFICATION METHOD (AT SITE) SM: PART 4500-O C	4.9	0.5
MIXED LIQUOR SUSPENDED SOLIDS	mg/L	MIXED LIQUOR SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	1,100	5.0
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.





## ANALYSIS REPORT

**CUSTOMER NAME** : THE RITZ-CARLTON RESIDENCES, BANGKOK  
**ADDRESS** : 114 NARADHIWAS RAJANAGARINDRA ROAD SI LOM BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhaw@ritzcarlton.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : SEPTEMBER 20, 2024  
**SAMPLING TIME** : 1/  
**SAMPLING METHOD** : GRAB  
**SAMPLING BY** : MR WEERAYUT MOKKAEW  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM  
**RECEIVED DATE** : SEPTEMBER 20, 2024  
**ANALYTICAL DATE** : SEPTEMBER 20-27, 2024  
**ISSUE DATE** : SEPTEMBER 30, 2024  
**REPORT NO.** : 2024-U090625  
**WORK NO.** : 2023-007527  
**ANALYSIS NO.** : T24AV997-0001 - T24AV997-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 16:10 HOUR 1/ T24AV997-0001	2 15:50 HOUR 1/ T24AV997-0002		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H <sup>+</sup> B AND 1060 B	7.1 (31.4°C)	6.7 (31.4°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	163	109	≤ 30	2.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	95.8	60.1	≤ 40	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	358	344	≤ 1,000	25
SETTLEABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	0.6	< 0.1	-	0.1
SULPHIDE <sup>b</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sup>2-</sup> F)	< 0.50	< 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	38.4	17.4	≤ 35	1.5



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 16:10 HOUR 1/ T24AV997-0001	2 15:50 HOUR 1/ T24AV997-0002		
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	ND	≤ 20	3
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	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, 24<sup>th</sup> EDITION, 2023.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.

RESULT 1 : บ่อพักน้ำเสีย (EQUALIZATION TANK)

RESULT 2 : บ่อน้ำใส (EFFLUENT TANK)

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 141, PART 233 D, DATED AUGUST 27, 2024.

ND : NOT DETECTED.



## ANALYSIS REPORT

**CUSTOMER NAME** : THE RITZ-CARLTON RESIDENCES,BANGKOK  
**ADDRESS** : 114 NARADHIWAS RAJANAGARINDRA ROAD SI LOM BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhow@ritzcarlton.com  
**SAMPLING SOURCE** : THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : WATER SUPPLY  
**SAMPLING DATE** : SEPTEMBER 20, 2024  
**SAMPLING TIME** : 15:55 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR WEERAYUT MOKKAEW  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM  
**RECEIVED DATE** : SEPTEMBER 20, 2024  
**ANALYTICAL DATE** : SEPTEMBER 20-24, 2024  
**ISSUE DATE** : SEPTEMBER 30, 2024  
**REPORT NO.** : 2024-U090627  
**WORK NO.** : 2023-007527  
**ANALYSIS NO.** : T24AV997-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ก่อนนำใช้ในโครงการ T24AV997-0003		
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	124	≤ 1,000	25
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR		

<sup>a</sup> : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

<sup>b</sup> : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

<sup>c</sup> : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.

REGULATORY STANDARD : CRITERIA OF WATER SUPPLY QUALITY, NOTIFICATION OF THE METROPOLITAN WATERWORKS AUTHORITY, B.E. 2565 (2022).



## ANALYSIS REPORT

**CUSTOMER NAME** : THE RITZ-CARLTON RESIDENCES,BANGKOK  
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**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhow@ritzcarlton.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : SLURRY IN AERATION TANK  
**SAMPLING DATE** : SEPTEMBER 20, 2024  
**SAMPLING TIME** : 16:20 HOUR  
**SAMPLING METHOD** : GRAB  
**SAMPLING BY** : MR WEERAYUT MOKKAEW  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM

**RECEIVED DATE** : SEPTEMBER 20, 2024  
**ANALYTICAL DATE** : SEPTEMBER 20-26, 2024  
**ISSUE DATE** : SEPTEMBER 30, 2024  
**REPORT NO.** : 2024-U090628  
**WORK NO.** : 2023-007527  
**ANALYSIS NO.** : T24AV997-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			AERATION TANK T24AV997-0004	
pH	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500 -H <sup>+</sup> B AND 1060 B	6.6 (32.2°C)	-
DISSOLVED OXYGEN	mg/L	AZIDE MODIFICATION METHOD (AT SITE) SM: PART 4500-O C	3.3	0.5
MIXED LIQUOR SUSPENDED SOLIDS	mg/L	MIXED LIQUOR SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	214	5.0
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.





## ANALYSIS REPORT

**CUSTOMER NAME** : THE RITZ-CARLTON RESIDENCES, BANGKOK  
**ADDRESS** : 114 NARADHIWAS RAJANAGARINDRA ROAD SI LOM BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhaw@ritzcarlton.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : WASTEWATER **RECEIVED DATE** : OCTOBER 25, 2024  
**SAMPLING DATE** : OCTOBER 25, 2024 **ANALYTICAL DATE** : OCTOBER 25 - NOVEMBER 4, 2024  
**SAMPLING TIME** : 1/ **ISSUE DATE** : NOVEMBER 4, 2024  
**SAMPLING METHOD** : GRAB **REPORT NO.** : T24AZ149-0001  
**SAMPLING BY** : MR SUKSAN BOONLEANG **WORK NO.** : 2023-007527  
**ANALYZED BY** : MISS ARIYA THARAROM **ANALYSIS NO.** : T24AZ149-0001 - T24AZ149-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 15:45 HOUR 1/ T24AZ149-0001	2 15:30 HOUR 1/ T24AZ149-0002		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H <sup>+</sup> B AND 1060 B	7.0 (30.5°C)	6.6 (31.5°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	126	37.7	≤ 30	2.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	80.0	62.2	≤ 40	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	304	349	≤ 1,000	25
SETTLEABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	1.0	0.5	-	0.1
SULPHIDE <sup>b</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sup>2-</sup> F)	< 0.50	< 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	42.8	13.7	≤ 35	1.5



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 15:45 HOUR 1/ T24AZ149-0001	2 15:30 HOUR 1/ T24AZ149-0002		
OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	8	ND	≤ 20	3
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	YELLOW/TURBID BROWN		

<sup>a</sup> : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

<sup>b</sup> : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

<sup>c</sup> : 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, 24<sup>th</sup> EDITION, 2023.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.

RESULT 1 : บ่อพักน้ำเสีย (EQUALIZATION TANK)

RESULT 2 : บ่อน้ำใส (EFFLUENT TANK)

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 141, PART 233 D, DATED AUGUST 27, 2024.

BIOCHEMICAL OXYGEN DEMAND (T24AZ149-0002) : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B,5(e).

ND : NOT DETECTED.



## ANALYSIS REPORT

**CUSTOMER NAME** : THE RITZ-CARLTON RESIDENCES,BANGKOK  
**ADDRESS** : 114 NARADHIWAS RAJANAGARINDRA ROAD SI LOM BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhow@ritzcarlton.com  
**SAMPLING SOURCE** : THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : WATER SUPPLY  
**SAMPLING DATE** : OCTOBER 25, 2024  
**SAMPLING TIME** : 15:35 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR SUKSAN BOONLEANG  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM  
**RECEIVED DATE** : OCTOBER 25, 2024  
**ANALYTICAL DATE** : OCTOBER 25 - NOVEMBER 4, 2024  
**ISSUE DATE** : NOVEMBER 4, 2024  
**REPORT NO.** : 2024-U103086  
**WORK NO.** : 2023-007527  
**ANALYSIS NO.** : T24AZ149-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			สีของน้ำในโครงการ T24AZ149-0003		
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	144	≤ 1,000	25
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR -		

<sup>a</sup> : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

<sup>b</sup> : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

<sup>c</sup> : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.

REGULATORY STANDARD : CRITERIA OF WATER SUPPLY QUALITY, NOTIFICATION OF THE METROPOLITAN WATERWORKS AUTHORITY, B.E. 2565 (2022).

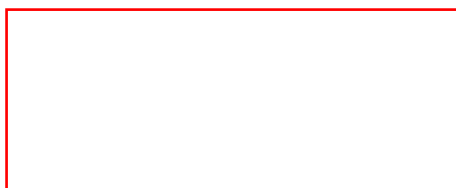


## ANALYSIS REPORT

**CUSTOMER NAME** : THE RITZ-CARLTON RESIDENCES,BANGKOK  
**ADDRESS** : 114 NARADHIWAS RAJANAGARINDRA ROAD SI LOM BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhow@ritzcarlton.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : SLURRY IN AERATION TANK **RECEIVED DATE** : OCTOBER 25, 2024  
**SAMPLING DATE** : OCTOBER 25, 2024 **ANALYTICAL DATE** : OCTOBER 25 - NOVEMBER 2, 2024  
**SAMPLING TIME** : 15:40 HOUR **ISSUE DATE** : NOVEMBER 4, 2024  
**SAMPLING METHOD** : GRAB **REPORT NO.** : 2024-U103087  
**SAMPLING BY** : MR SUKSAN BOONLEANG **WORK NO.** : 2023-007527  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM **ANALYSIS NO.** : T24AZ149-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			AERATION TANK T24AZ149-0004	
pH	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500 -H <sup>+</sup> B AND 1060 B	6.4 (31.7°C)	-
DISSOLVED OXYGEN	mg/L	AZIDE MODIFICATION METHOD (AT SITE) SM: PART 4500-O C	1.8	0.5
MIXED LIQUOR SUSPENDED SOLIDS	mg/L	MIXED LIQUOR SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	130	5.0
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.





## ANALYSIS REPORT

**CUSTOMER NAME** : THE RITZ-CARLTON RESIDENCES, BANGKOK  
**ADDRESS** : 114 NARADHIWAS RAJANAGARINDRA ROAD SI LOM BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhaw@ritzcarlton.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : NOVEMBER 29, 2024  
**SAMPLING TIME** : 1/  
**SAMPLING METHOD** : GRAB  
**SAMPLING BY** : MR WEERAYUT MOKKAEW  
**ANALYZED BY** : MISS ARIYA THARAROM  
**RECEIVED DATE** : NOVEMBER 29, 2024  
**ANALYTICAL DATE** : NOVEMBER 29 - DECEMBER 9, 2024  
**ISSUE DATE** : DECEMBER 9, 2024  
**REPORT NO.** : 2024-U115188  
**WORK NO.** : 2023-007527  
**ANALYSIS NO.** : T24BC230-0001 - T24BC230-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT	LIMIT OF QUANTITATION (LOQ)
			1 16:45 HOUR 1/ T24BC230-0001	2 16:20 HOUR 1/ T24BC230-0002			
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H <sup>+</sup> B AND 1060 B	6.6 (30.7°C)	7.2 (30.6°C)	5.5-9.0	-	-
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	311	97.9	≤ 30	-	2.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	178	50.2	≤ 40	-	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	342	354	≤ 1,000	-	25
SETTLEABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	6.0	0.2	-	0.1	-
SULPHIDE <sup>b</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sub>2</sub> F)	2.7	< 0.50	≤ 1.0	-	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	56.3	32.3	≤ 35	1.5	5.0



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT	LIMIT OF QUANTITATION (LOQ)
			1 16:45 HOUR 1/ T24BC230-0001	2 16:20 HOUR 1/ T24BC230-0002			
OIL AND GREASE <sup>a</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	15	< 3	≤ 20	-	3
<b>SAMPLE CONDITION</b>							
WATER'S COLOUR/TURBID			BROWN/TURBID	YELLOW/TURBID			
SEDIMENT			BLACK	BROWN			

<sup>a</sup> : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

<sup>b</sup> : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

<sup>c</sup> : 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, 24<sup>th</sup> EDITION, 2023.

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.

RESULT 1 : บ่อพักน้ำเสีย (EQUALIZATION TANK)

RESULT 2 : บ่อน้ำใส (EFFLUENT TANK)

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 141, PART 233 D, DATED AUGUST 27, 2024.



## ANALYSIS REPORT

**CUSTOMER NAME** : THE RITZ-CARLTON RESIDENCES,BANGKOK  
**ADDRESS** : 114 NARADHIWAS RAJANAGARINDRA ROAD SI LOM BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhow@ritzcarlton.com  
**SAMPLING SOURCE** : THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : WATER SUPPLY  
**SAMPLING DATE** : NOVEMBER 29, 2024  
**SAMPLING TIME** : 16:25 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR WEERAYUT MOKKAEW  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM  
**RECEIVED DATE** : NOVEMBER 29, 2024  
**ANALYTICAL DATE** : NOVEMBER 29 - DECEMBER 4, 2024  
**ISSUE DATE** : DECEMBER 9, 2024  
**REPORT NO.** : 2024-U115189  
**WORK NO.** : 2023-007527  
**ANALYSIS NO.** : T24BC230-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	LIMIT OF QUANTITATION (LOQ)
			ก๊อกรนำใช้ในโครงการ T24BC230-0003		
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	195	≤ 1,000	25
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR -		

<sup>a</sup> : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

<sup>b</sup> : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

<sup>c</sup> : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.

REGULATORY STANDARD : CRITERIA OF WATER SUPPLY QUALITY, NOTIFICATION OF THE METROPOLITAN WATERWORKS AUTHORITY,  
B.E. 2565 (2022).



## ANALYSIS REPORT

**CUSTOMER NAME** : THE RITZ-CARLTON RESIDENCES,BANGKOK  
**ADDRESS** : 114 NARADHIWAS RAJANAGARINDRA ROAD SI LOM BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhow@ritzcarlton.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : SLURRY IN AERATION TANK **RECEIVED DATE** : NOVEMBER 29, 2024  
**SAMPLING DATE** : NOVEMBER 29, 2024 **ANALYTICAL DATE** : NOVEMBER 29 - DECEMBER 4, 2024  
**SAMPLING TIME** : 16:30 HOUR **ISSUE DATE** : DECEMBER 9, 2024  
**SAMPLING METHOD** : GRAB **REPORT NO.** : 2024-U115190  
**SAMPLING BY** : MR WEERAYUT MOKKAEW **WORK NO.** : 2023-007527  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM **ANALYSIS NO.** : T24BC230-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			AERATION TANK T24BC230-0004	
pH	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500 -H <sup>+</sup> B AND 1060 B	7.3 (31.5°C)	-
DISSOLVED OXYGEN	mg/L	AZIDE MODIFICATION METHOD (AT SITE) SM: PART 4500-O C	2.3	0.5
MIXED LIQUOR SUSPENDED SOLIDS	mg/L	MIXED LIQUOR SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	126	5.0
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.





## ANALYSIS REPORT

**CUSTOMER NAME** : THE RITZ-CARLTON RESIDENCES, BANGKOK  
**ADDRESS** : 114 NARADHIWAS RAJANAGARINDRA ROAD SI LOM BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhaw@ritzcarlton.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : DECEMBER 20, 2024  
**SAMPLING TIME** : 1/  
**SAMPLING METHOD** : GRAB  
**SAMPLING BY** : MR SUKSAN BOONLEANG  
**ANALYZED BY** : MISS ARIYA THARAROM  
**RECEIVED DATE** : DECEMBER 20, 2024  
**ANALYTICAL DATE** : DECEMBER 20-29, 2024  
**ISSUE DATE** : JANUARY 3, 2025  
**REPORT NO.** : 2025-U000356  
**WORK NO.** : 2023-007527  
**ANALYSIS NO.** : T24BE018-0001 - T24BE018-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT	LIMIT OF QUANTITATION (LOQ)
			1 15:10 HOUR 1/ T24BE018-0001	2 14:55 HOUR 1/ T24BE018-0002			
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H <sup>+</sup> B AND 1060 B	6.8 (28.9°C)	7.3 (30.4°C)	5.5-9.0	-	-
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	558	50.2	≤ 30	-	2.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	699	44.4	≤ 40	-	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	459	386	≤ 1,000	-	25
SETTLEABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	28.0	< 0.1	-	0.1	-
SULPHIDE <sup>b</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sup>2-</sup> F)	3.0	< 0.50	≤ 1.0	-	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	125	36.4	≤ 35	1.5	5.0



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT	LIMIT OF QUANTITATION (LOQ)
			1 15:10 HOUR 1/ T24BE018-0001	2 14:55 HOUR 1/ T24BE018-0002			
OIL AND GREASE <sup>a</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	266	< 3	≤ 20	-	3
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID GREY	YELLOW/TURBID BROWN			

<sup>a</sup> : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

<sup>b</sup> : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

<sup>c</sup> : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.

RESULT 1 : ปอพักน้ำเสีย (EQUALIZATION TANK)

RESULT 2 : ปอน้ำใส (EFFLUENT TANK)

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 141, PART 233 D, DATED AUGUST 27, 2024.



## ANALYSIS REPORT

**CUSTOMER NAME** : THE RITZ-CARLTON RESIDENCES,BANGKOK  
**ADDRESS** : 114 NARADHIWAS RAJANAGARINDRA ROAD SI LOM BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhow@ritzcarlton.com  
**SAMPLING SOURCE** : THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : WATER SUPPLY  
**SAMPLING DATE** : DECEMBER 20, 2024  
**SAMPLING TIME** : 15:05 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR SUKSAN BOONLEANG  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM  
**RECEIVED DATE** : DECEMBER 20, 2024  
**ANALYTICAL DATE** : DECEMBER 20-29, 2024  
**ISSUE DATE** : JANUARY 3, 2025  
**REPORT NO.** : 2025-U000361  
**WORK NO.** : 2023-007527  
**ANALYSIS NO.** : T24BE018-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	LIMIT OF QUANTITATION (LOQ)
			ที่ออกใช้ในโครงการ T24BE018-0003		
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	228	≤ 1,000	25
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR -		

<sup>a</sup> : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

<sup>b</sup> : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

<sup>c</sup> : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.

REGULATORY STANDARD : CRITERIA OF WATER SUPPLY QUALITY, NOTIFICATION OF THE METROPOLITAN WATERWORKS AUTHORITY,  
B.E. 2565 (2022).



## ANALYSIS REPORT

**CUSTOMER NAME** : THE RITZ-CARLTON RESIDENCES,BANGKOK  
**ADDRESS** : 114 NARADHIWAS RAJANAGARINDRA ROAD SI LOM BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2062 1414 e-mail : Watchara.Chansamakhow@ritzcarlton.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF THE RITZ-CARLTON RESIDENCE, BANGKOK  
**SAMPLE TYPE** : SLURRY IN AERATION TANK **RECEIVED DATE** : DECEMBER 20, 2024  
**SAMPLING DATE** : DECEMBER 20, 2024 **ANALYTICAL DATE** : DECEMBER 20-29, 2024  
**SAMPLING TIME** : 15:00 HOUR **ISSUE DATE** : JANUARY 3, 2025  
**SAMPLING METHOD** : GRAB **REPORT NO.** : 2025-U000362  
**SAMPLING BY** : MR SUKSAN BOONLEANG **WORK NO.** : 2023-007527  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM **ANALYSIS NO.** : T24BE018-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			AERATION TANK T24BE018-0004	
pH	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500 -H <sup>+</sup> B AND 1060 B	7.6 (30.6°C)	-
DISSOLVED OXYGEN	mg/L	AZIDE MODIFICATION METHOD (AT SITE) SM: PART 4500-O C	2.5	0.5
MIXED LIQUOR SUSPENDED SOLIDS	mg/L	MIXED LIQUOR SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	143	5.0
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			BROWN/TURBID BROWN	

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24<sup>th</sup> EDITION, 2023.

