

# ผลวิเคราะห์คุณภาพน้ำทิ้งของระบบบำบัดน้ำเสีย



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



NSC-TISI-TIS 17025  
TESTING 0207



TESTING  
No. 0063

## ANALYSIS REPORT

**CUSTOMER NAME** : KASEMKIJ COMPANY LIMITED  
**ADDRESS** : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330  
**CONTACT INFORMATION** : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF CAPE HOUSE, LUANGSUAN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : JANUARY 16, 2024  
**SAMPLING TIME** : -  
**SAMPLING METHOD** : -  
**SAMPLING BY** : CUSTOMER  
**ANALYZED BY** : MISS ARIYA THARAROM  
**RECEIVED DATE** : JANUARY 17, 2024  
**ANALYTICAL DATE** : JANUARY 17-23, 2024  
**REPORT NO.** : 2024-U006625  
**WORK NO.** : 2024-000042  
**ANALYSIS NO.** : T24AA960-0001 - T24AA960-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 T24AA960-0001	2 T24AA960-0002		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (SM: PART 4500-H <sup>+</sup> B)	7.8 (25°C)	6.9 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	159	7.1	≤ 30	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	45.2	14.6	≤ 40	5.0
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	25.9	11.9	≤ 35	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	7	ND	≤ 20	3
<b>MICROBIOLOGY</b>						
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	4,800	-	1.8
<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, 23<sup>rd</sup> EDITION, 2017.

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

RESULT 1 : INFLUENT

RESULT 2 : EFFLUENT

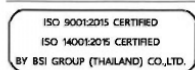
REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

JANUARY 25, 2024



- PROHIBITED TO PARTIALLY COPY ANALYSIS REPORT PRIOR TO WRITTEN PERMISSION BY THE LABORATORY.
- THIS ANALYSIS REPORT APPROVES ONLY FOR SUBMITTED SAMPLES.

1/1



- End of Analysis Report -



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



## ANALYSIS REPORT

**CUSTOMER NAME** : KASEMKIJ COMPANY LIMITED  
**ADDRESS** : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330  
**CONTACT INFORMATION** : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF CAPE HOUSE, LUANGSUAN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : FEBRUARY 13, 2024  
**SAMPLING TIME** : -  
**SAMPLING METHOD** : -  
**SAMPLING BY** : CUSTOMER  
**ANALYZED BY** : MISS ARIYA THARAROM  
**RECEIVED DATE** : FEBRUARY 14, 2024  
**ANALYTICAL DATE** : FEBRUARY 14-21, 2024  
**ISSUE DATE** : FEBRUARY 23, 2024  
**REPORT NO.** : 2024-U015636  
**WORK NO.** : 2024-001157  
**ANALYSIS NO.** : T24AC993-0001 - T24AC993-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 T24AC993-0001	2 T24AC993-0002		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (SM: PART 4500 -H <sup>+</sup> B)	7.1 (25°C)	6.6 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	442	114	≤ 30	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	177	14.0	≤ 40	5.0
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	51.4	< LOQ	≤ 35	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	9	ND	≤ 20	3

ISO 9001:2015 CERTIFIED  
ISO 14001:2015 CERTIFIED  
BY BSI GROUP (THAILAND) CO.,LTD.

- PROHIBITED TO PARTIALLY COPY ANALYSIS REPORT PRIOR TO WRITTEN PERMISSION BY THE LABORATORY.
- THIS ANALYSIS REPORT APPROVES ONLY FOR THE SAMPLES AS RECEIVED.

1/2



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 T24AC993-0001	2 T24AC993-0002		
MICROBIOLOGY						
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	4,000	-	1.8
SAMPLE CONDITION						
WATER'S COLOUR/TURBID			YELLOW/TURBID	YELLOW/TURBID		
SEDIMENT			BROWN	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, 23<sup>rd</sup> EDITION, 2017.

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

RESULT 1 : INFLUENT

RESULT 2 : EFFLUENT

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.

BIOCHEMICAL OXYGEN DEMAND (T24AC993-0002) : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B.5(e).

ND : NON-DETECTABLE.

< LOQ : < LIMIT OF QUANTITATION (TOTAL KJELDAHL NITROGEN  $\geq 1.5$  AND < 5.0 mg/L).

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 23, 2024



United Analyst and Engineering Consultant Co., Ltd.

3 Soi Udomsuk 41, Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260

Tel.0 2763 2828 Fax 0 2763 2800 www.uaeconsultant.com E-mail: uae@uaeconsultant.com



NSC-TISI-TIS 17025  
TESTING 0207



TESTING  
No. 0063

## ANALYSIS REPORT

**CUSTOMER NAME** : KASEMKIJ COMPANY LIMITED  
**ADDRESS** : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330  
**CONTACT INFORMATION** : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF CAPE HOUSE, LUANGSUAN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : MARCH 6, 2024  
**SAMPLING TIME** : -  
**SAMPLING METHOD** : -  
**SAMPLING BY** : CUSTOMER  
**ANALYZED BY** : MISS ARIYA THARAROM  
**RECEIVED DATE** : MARCH 6, 2024  
**ANALYTICAL DATE** : MARCH 6-13, 2024  
**ISSUE DATE** : MARCH 15, 2024  
**REPORT NO.** : 2024-U021597  
**WORK NO.** : 2024-002146  
**ANALYSIS NO.** : T24AE594-0001 - T24AE594-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 T24AE594-0001	2 T24AE594-0002		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (SM: PART 4500 -H <sup>+</sup> B)	8.2 (25°C)	6.5 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	161	8.4	≤ 30	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	178	34.0	≤ 40	5.0
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	94.5	6.3	≤ 35	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	4	ND	≤ 20	3

ISO 9001:2015 CERTIFIED  
ISO 14001:2015 CERTIFIED  
BY BSI GROUP (THAILAND) CO.,LTD.

- PROHIBITED TO PARTIALLY COPY ANALYSIS REPORT PRIOR TO WRITTEN PERMISSION BY THE LABORATORY.
- THIS ANALYSIS REPORT APPROVES ONLY FOR THE SAMPLES AS RECEIVED.

1/2







United Analyst and Engineering Consultant Co., Ltd.

3 Soi Udomsuk 41, Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260

Tel.0 2763 2828 Fax 0 2763 2800 www.uaeconsultant.com E-mail: uae@uaeconsultant.com



NSC-TISI-TIS 17025  
TESTING 0207



TESTING  
No. 0063

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 T24AE594-0001	2 T24AE594-0002		
MICROBIOLOGY						
FAECAL COLIFORM BACTERIA b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	54,000	-	1.8
SAMPLE CONDITION						
WATER'S COLOUR/TURBID			YELLOW/TURBID	YELLOW/TURBID		
SEDIMENT			BROWN	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, 23<sup>rd</sup> EDITION, 2017.

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

RESULT 1 : INFLUENT

RESULT 2 : EFFLUENT

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.

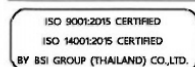
BIOCHEMICAL OXYGEN DEMAND (T24AE594-0002) : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B.5(e).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MARCH 15, 2024



• PROHIBITED TO PARTIALLY COPY ANALYSIS REPORT PRIOR TO WRITTEN PERMISSION BY THE LABORATORY.

• THIS ANALYSIS REPORT APPROVES ONLY FOR THE SAMPLES AS RECEIVED.

2/2

2024-U021597

- End of Analysis Report -



United Analyst and Engineering Consultant Co., Ltd.

3 Soi Udomsuk 41, Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260

Tel.0 2763 2828 Fax 0 2763 2800 www.uaiconsultant.com E-mail: uae@uaiconsultant.com



NSC-TISI-TIS 17025  
TESTING 0207



TESTING  
No. 0063

## ANALYSIS REPORT

**CUSTOMER NAME** : KASEMKIJ COMPANY LIMITED  
**ADDRESS** : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330  
**CONTACT INFORMATION** : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF CAPE HOUSE  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : APRIL 9, 2024  
**SAMPLING TIME** : -  
**SAMPLING METHOD** : -  
**SAMPLING BY** : CUSTOMER  
**ANALYZED BY** : MISS ARIYA THARAROM  
**RECEIVED DATE** : APRIL 10, 2024  
**ANALYTICAL DATE** : APRIL 10-23, 2024  
**ISSUE DATE** : APRIL 26, 2024  
**REPORT NO.** : 2024-U034771  
**WORK NO.** : 2024-003274  
**ANALYSIS NO.** : T24AH701-0001 - T24AH701-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 T24AH701-0001	2 T24AH701-0002		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (SM: PART 4500 -H <sup>+</sup> B)	7.0 (25°C)	7.6 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	316	16.9	≤ 30	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	559	15.1	≤ 40	5.0
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	42.1	8.2	≤ 35	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	9	ND	≤ 20	3
MICROBIOLOGY						
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221E)	>160,000	14,000	-	1.8
SAMPLE CONDITION						
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	YELLOW/CLEAR 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, 23<sup>rd</sup> EDITION, 2017.

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

RESULT 1 : INFLUENT

RESULT 2 : EFFLUENT

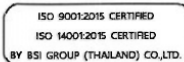
REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 26, 2024



• PROHIBITED TO PARTIALLY COPY ANALYSIS REPORT PRIOR TO WRITTEN PERMISSION BY THE LABORATORY.

• THIS ANALYSIS REPORT APPROVES ONLY FOR THE SAMPLES AS RECEIVED.

1/1



- End of Analysis Report -



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

## ANALYSIS REPORT

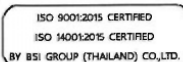
**CUSTOMER NAME** : KASEMKIJ COMPANY LIMITED  
**ADDRESS** : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330  
**CONTACT INFORMATION** : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF CAPE HOUSE  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : -  
**SAMPLING METHOD** : -  
**SAMPLING BY** : CUSTOMER  
**ANALYZED BY** : MISS ARIYA THARAROM  
**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-23, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U045075  
**WORK NO.** : 2024-004319  
**ANALYSIS NO.** : T24AK269-0001 - T24AK269-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 T24AK269-0001	2 T24AK269-0002		
pH	-	ELECTROMETRIC METHOD (SM: PART 4500 -H <sup>+</sup> B)	7.3 (25°C)	6.9 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	146	17.2	≤ 30	2.0
SUSPENDED SOLIDS	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	104	14.6	≤ 40	5.0
TOTAL KJELDAHL NITROGEN	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	37.0	28.0	≤ 35	1.5
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	9	ND	≤ 20	3
MICROBIOLOGY						
FAECAL COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	>160,000	14,000	-	1.8
SAMPLE CONDITION						
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	YELLOW/TURBID BROWN		

IN-HOUSE : BASED ON STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23<sup>rd</sup> EDITION, 2017.  
SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 23<sup>rd</sup> EDITION, 2017.  
RESULT 1 : INFLUENT  
RESULT 2 : EFFLUENT  
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.  
ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR



- PROHIBITED TO PARTIALLY COPY ANALYSIS REPORT PRIOR TO WRITTEN PERMISSION BY THE LABORATORY.
- THIS ANALYSIS REPORT APPROVES ONLY FOR THE SAMPLES AS RECEIVED.

1/1



- End of Analysis Report -



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



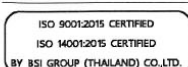
NSC-TISI-TIS 17025  
TESTING 0207

TESTING  
No. 0063

## ANALYSIS REPORT

**CUSTOMER NAME** : KASEMKIJ COMPANY LIMITED  
**ADDRESS** : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330  
**CONTACT INFORMATION** : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF CAPE HOUSE  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : JUNE 11, 2024  
**SAMPLING TIME** : -  
**SAMPLING METHOD** : -  
**SAMPLING BY** : CUSTOMER  
**ANALYZED BY** : MISS ARIYA THARAROM  
**RECEIVED DATE** : JUNE 12, 2024  
**ANALYTICAL DATE** : JUNE 12-19, 2024  
**ISSUE DATE** : JUNE 21, 2024  
**REPORT NO.** : 2024-U055935  
**WORK NO.** : 2024-005215  
**ANALYSIS NO.** : T24AM951-0001 - T24AM951-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 T24AM951-0001	2 T24AM951-0002		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (SM: PART 4500 -H <sup>+</sup> B)	7.6 (25°C)	6.8 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	161	7.0	≤ 30	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	247	15.5	≤ 40	5.0
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	104	18.3	≤ 35	15
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	28	ND	≤ 20	3



- PROHIBITED TO PARTIALLY COPY ANALYSIS REPORT PRIOR TO WRITTEN PERMISSION BY THE LABORATORY.
- THIS ANALYSIS REPORT APPROVES ONLY FOR THE SAMPLES AS RECEIVED.

1/2







# United Analyst and Engineering Consultant Co., Ltd.

3 Soi Udomsuk 41, Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260

Tel.0 2763 2828 Fax 0 2763 2800 www.uaeconsultant.com E-mail: uae@uaeconsultant.com



NSC-TISI-TIS 17025  
TESTING 0207



TESTING  
No. 0063

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 T24AM951-0001	2 T24AM951-0002		
MICROBIOLOGY						
FAECAL COLIFORM BACTERIA b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	>160,000	4,300	-	1.8
SAMPLE CONDITION						
WATER'S COLOUR/TURBID			YELLOW/TURBID	YELLOW/TURBID		
SEDIMENT			BROWN	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 : INFLUENT

RESULT 2 : EFFLUENT

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.

BIOCHEMICAL OXYGEN DEMAND (T24AM951-0002) : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B.5(e).

ND : NOT DETECTED.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

ISO 9001:2015 CERTIFIED  
ISO 14001:2015 CERTIFIED  
BY BSI GROUP (THAILAND) CO.,LTD.

• PROHIBITED TO PARTIALLY COPY ANALYSIS REPORT PRIOR TO WRITTEN PERMISSION BY THE LABORATORY.

• THIS ANALYSIS REPORT APPROVES ONLY FOR THE SAMPLES AS RECEIVED.

2/2

2024-U055935

- End of Analysis Report -

# ผลวิเคราะห์คุณภาพน้ำทิ้งที่จذبระบายน้ำทิ้งออกนอกโครงการ



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



NSC - TISI - TIS 17025  
TESTING 0207



TESTING  
No. 0063

## ANALYSIS REPORT

**CUSTOMER NAME** : KASEMKIJ COMPANY LIMITED  
**ADDRESS** : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330  
**CONTACT INFORMATION** : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF CAPE HOUSE, LUANGSUAN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JANUARY 16, 2024  
**SAMPLING TIME** : -  
**SAMPLING METHOD** : -  
**SAMPLING BY** : CUSTOMER  
**ANALYZED BY** : MISS ARIYA THARAROM  
**RECEIVED DATE** : JANUARY 17, 2024  
**ANALYTICAL DATE** : JANUARY 17-23, 2024  
**REPORT NO.** : 2024-U006626  
**WORK NO.** : 2024-000042  
**ANALYSIS NO.** : T24AA960-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			จุดระบายน้ำออกนอกโครงการ T24AA960-0003		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (SM: PART 4500-H <sup>+</sup> B)	6.8 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	5.3	≤ 30	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	15.6	≤ 40	5.0
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	10.1	≤ 35	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	13,000	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			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, 23<sup>rd</sup> EDITION, 2017.

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

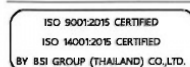
REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005.

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

JANUARY 25, 2024



- PROHIBITED TO PARTIALLY COPY ANALYSIS REPORT PRIOR TO WRITTEN PERMISSION BY THE LABORATORY.
- THIS ANALYSIS REPORT APPROVES ONLY FOR SUBMITTED SAMPLES.

1/1

- End of Analysis Report -



## ANALYSIS REPORT

**CUSTOMER NAME** : KASEMKIJ COMPANY LIMITED  
**ADDRESS** : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330  
**CONTACT INFORMATION** : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF CAPE HOUSE, LUANGSUAN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : FEBRUARY 13, 2024  
**SAMPLING TIME** : -  
**SAMPLING METHOD** : -  
**SAMPLING BY** : CUSTOMER  
**ANALYZED BY** : MISS ARIYA THARAROM  
**RECEIVED DATE** : FEBRUARY 14, 2024  
**ANALYTICAL DATE** : FEBRUARY 14-21, 2024  
**ISSUE DATE** : FEBRUARY 23, 2024  
**REPORT NO.** : 2024-U015644  
**WORK NO.** : 2024-001157  
**ANALYSIS NO.** : T24AC993-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			จุดตรวจน้ำออกนอกโครงการ T24AC993-0003		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (SM: PART 4500-H <sup>+</sup> B)	6.5 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	15.8	≤ 30	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	15.5	≤ 40	5.0
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	< LOQ	≤ 35	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	4,600	-	1.8
<b>SAMPLE CONDITION</b>					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			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, 23<sup>rd</sup> EDITION, 2017.

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

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.

\* : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B.5(e).

ND : NON-DETECTABLE.

< LOQ : < LIMIT OF QUANTITATION (TOTAL KJELDAHL NITROGEN ≥ 1.5 AND < 5.0 mg/L).

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 23, 2024

ISO 9001:2015 CERTIFIED  
ISO 14001:2015 CERTIFIED  
BY BSI GROUP (THAILAND) CO., LTD.

• PROHIBITED TO PARTIALLY COPY ANALYSIS REPORT PRIOR TO WRITTEN PERMISSION BY THE LABORATORY.

• THIS ANALYSIS REPORT APPROVES ONLY FOR THE SAMPLES AS RECEIVED.

1/1

- End of Analysis Report -



## ANALYSIS REPORT

**CUSTOMER NAME** : KASEMKIJ COMPANY LIMITED  
**ADDRESS** : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330  
**CONTACT INFORMATION** : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF CAPE HOUSE, LUANGSUAN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MARCH 6, 2024  
**SAMPLING TIME** : -  
**SAMPLING METHOD** : -  
**SAMPLING BY** : CUSTOMER  
**ANALYZED BY** : MISS ARIYA THARAROM  
**RECEIVED DATE** : MARCH 6, 2024  
**ANALYTICAL DATE** : MARCH 6-13, 2024  
**ISSUE DATE** : MARCH 15, 2024  
**REPORT NO.** : 2024-U021598  
**WORK NO.** : 2024-002146  
**ANALYSIS NO.** : T24AE594-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			จุดระบายนํ้าออกนอกโครงการ T24AE594-0003		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (SM: PART 4500-H <sup>+</sup> B)	6.4 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND* <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	8.1	≤ 30	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	29.9	≤ 40	5.0
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	5.9	≤ 35	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	35,000	-	1.8
<b>SAMPLE CONDITION</b>					
WATER'S COLOUR/TURBID SEDIMENT			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, 23<sup>rd</sup> EDITION, 2017.

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

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.

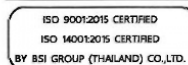
\* : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B.5(e).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MARCH 15, 2024



• PROHIBITED TO PARTIALLY COPY ANALYSIS REPORT PRIOR TO WRITTEN PERMISSION BY THE LABORATORY.

• THIS ANALYSIS REPORT APPROVES ONLY FOR THE SAMPLES AS RECEIVED.

1/1

- End of Analysis Report -





## ANALYSIS REPORT

**CUSTOMER NAME** : KASEMKIJ COMPANY LIMITED  
**ADDRESS** : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330  
**CONTACT INFORMATION** : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF CAPE HOUSE  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : APRIL 9, 2024  
**SAMPLING TIME** : -  
**SAMPLING METHOD** : -  
**SAMPLING BY** : CUSTOMER  
**ANALYZED BY** : MISS ARIYA THARAROM

**RECEIVED DATE** : APRIL 10, 2024  
**ANALYTICAL DATE** : APRIL 10-23, 2024  
**ISSUE DATE** : APRIL 26, 2024  
**REPORT NO.** : 2024-U034772  
**WORK NO.** : 2024-003274  
**ANALYSIS NO.** : T24AH701-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			จุดระบายน้ำออกนอกโครงการ T24AH701-0003		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (SM: PART 4500-H <sup>+</sup> B)	6.8 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	22.8	≤ 30	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	18.3	≤ 40	5.0
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	7.0	≤ 35	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	35,000	-	18
<b>SAMPLE CONDITION</b>					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			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, 23<sup>rd</sup> EDITION, 2017.

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

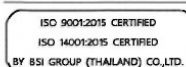
REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS B, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005.

ND : NON-DETECTABLE.



(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 26, 2024



• PROHIBITED TO PARTIALLY COPY ANALYSIS REPORT PRIOR TO WRITTEN PERMISSION BY THE LABORATORY.  
• THIS ANALYSIS REPORT APPROVES ONLY FOR THE SAMPLES AS RECEIVED.

1/1

- End of Analysis Report -



## ANALYSIS REPORT

**CUSTOMER NAME** : KASEMKIJ COMPANY LIMITED  
**ADDRESS** : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330  
**CONTACT INFORMATION** : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF CAPE HOUSE  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MAY 14, 2024  
**SAMPLING TIME** : -  
**SAMPLING METHOD** : -  
**SAMPLING BY** : CUSTOMER  
**ANALYZED BY** : MISS ARIYA THARAROM

**RECEIVED DATE** : MAY 15, 2024  
**ANALYTICAL DATE** : MAY 15-23, 2024  
**ISSUE DATE** : MAY 27, 2024  
**REPORT NO.** : 2024-U045077  
**WORK NO.** : 2024-004319  
**ANALYSIS NO.** : T24AK269-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			จุดระบายนํ้าออกนอกโครงการ T24AK269-0003		
pH	-	ELECTROMETRIC METHOD (SM: PART 4500-H <sup>+</sup> B)	7.0 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	15.6	≤ 30	2.0
SUSPENDED SOLIDS	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	10.4	≤ 40	5.0
TOTAL KJELDAHL NITROGEN	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	27.3	≤ 35	1.5
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
<b>MICROBIOLOGY</b>					
FAECAL COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 E)	7,900	-	1.8
<b>SAMPLE CONDITION</b>					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			BROWN		

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

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

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.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : KASEMKIJ COMPANY LIMITED  
**ADDRESS** : 43 SOI LANGSUAN PLOENCHIT ROAD, LUMPHINI PATHUM WAN BANGKOK 10330  
**CONTACT INFORMATION** : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com  
**SAMPLING SOURCE** : WASTEWATER TREATMENT PLANT OF CAPE HOUSE  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JUNE 11, 2024  
**SAMPLING TIME** : -  
**SAMPLING METHOD** : -  
**SAMPLING BY** : CUSTOMER  
**ANALYZED BY** : MISS ARIYA THARAROM  
**RECEIVED DATE** : JUNE 12, 2024  
**ANALYTICAL DATE** : JUNE 12-19, 2024  
**ISSUE DATE** : JUNE 21, 2024  
**REPORT NO.** : 2024-U055936  
**WORK NO.** : 2024-005215  
**ANALYSIS NO.** : T24AM951-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			จุดระบายน้ำออกนอกโครงการ T24AM951-0003		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (SM: PART 4500-H <sup>+</sup> B)	7.0 (25°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND* <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	4.8	≤ 30	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	13.0	≤ 40	5.0
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	17.8	≤ 35	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 20	3
MICROBIOLOGY					
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	11,000	-	1.8
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			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.

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.

\* : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B.5(e).

ND : NOT DETECTED.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR



# ผลวิเคราะห์คุณภาพน้ำสระว่ายน้ำ



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



TESTING  
No. 0063

## ANALYSIS REPORT

**CUSTOMER NAME** : KASEMKIJ COMPANY LIMITED  
**ADDRESS** : 120 SILOM ROAD SURİYAWONG BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com  
**SAMPLING SOURCE** : CAPE HOUSE LUANGSUAN  
**SAMPLE TYPE** : WATER SAMPLE FROM SWIMMING POOL  
**SAMPLING DATE** : JANUARY 16, 2024  
**SAMPLING TIME** : -  
**SAMPLING METHOD** : -  
**SAMPLING BY** : CUSTOMER  
**ANALYZED BY** : MR PITTAPAN LAEKODD  
**RECEIVED DATE** : JANUARY 17, 2024  
**ANALYTICAL DATE** : JANUARY 17-22, 2024  
**REPORT NO.** : 2024-U007060  
**WORK NO.** : 2024-000043  
**ANALYSIS NO.** : T24AA964-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			SWIMMING POOL (DEEP ZONE) T24AA964-0001		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H <sup>+</sup> B AND 1060 B	7.3 (25°C)	7.2-7.6*	-
RESIDUAL CHLORINE <sup>a</sup>	mg/L Cl <sub>2</sub>	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	1.7	1.0-3.0*	0.1
MICROBIOLOGY					
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221B)	< 1.1	< 10	1.1
<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, 23<sup>rd</sup> EDITION, 2017.

REGULATORY STANDARD: BANGKOK METROPOLITAN REGULATIONS FOR THE BUSINESS DISTRIEMENTAL TO HEALTH.

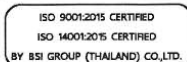
\* : NATIONAL SPA AND POOL INSTITUTE (NSPI).

A : MEASURED BY CUSTOMER.

*(Signature)*

(MISS CHAWEEWAN BOONLA)  
LABORATORY SUPERVISOR

JANUARY 26, 2024



- PROHIBITED TO PARTIALLY COPY ANALYSIS REPORT PRIOR TO WRITTEN PERMISSION BY THE LABORATORY.
- THIS ANALYSIS REPORT APPROVES ONLY FOR SUBMITTED SAMPLES.

1/1

- End of Analysis Report -







## United Analyst and Engineering Consultant Co., Ltd.

3 Soi Udomsuk 41, Sukhumvit Road, Bangchak, Phrakhanong, Bangkok 10260

Tel.0 2763 2828 Fax 0 2763 2800 www.uaeconsultant.com E-mail: uae@uaeconsultant.com



TESTING  
No.0063

### ANALYSIS REPORT

**CUSTOMER NAME** : KASEMKIJ COMPANY LIMITED  
**ADDRESS** : 120 SILOM ROAD SURYAWONG BANG RAK BANGKOK 10500  
**CONTACT INFORMATION** : TEL : 0 2233 8989-98 e-mail : kj-qc@kasemkij.com  
**SAMPLING SOURCE** : CAPE HOUSE  
**SAMPLE TYPE** : WATER SAMPLE FROM SWIMMING POOL  
**SAMPLING DATE** : APRIL 9, 2024  
**SAMPLING TIME** : -  
**SAMPLING METHOD** : -  
**SAMPLING BY** : CUSTOMER  
**ANALYZED BY** : MR PITTAPAN LAEKOOD  
**RECEIVED DATE** : APRIL 10, 2024  
**ANALYTICAL DATE** : APRIL 10-17, 2024  
**ISSUE DATE** : APRIL 24, 2024  
**REPORT NO.** : 2024-U032622  
**WORK NO.** : 2024-003275  
**ANALYSIS NO.** : T24AH709-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			SWIMMING POOL (DEEP ZONE) T24AH709-0001		
pH °	-	ELECTROMETRIC METHOD (SM: PART 4500-H <sup>+</sup> B)	7.3 (25°C)	7.2-7.6*	-
RESIDUAL CHLORINE °	mg/L Cl <sub>2</sub>	DPD FERROUS TITRIMETRIC METHOD (SM: PART 4500-Cl F)	2.6	1.0-3.0*	0.1
MICROBIOLOGY					
COLIFORM BACTERIA °	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221B)	< 1.1	< 10	1.1
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR -		

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

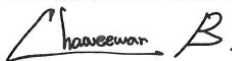
° : ISO/IEC 17025 ACCREDITED BY DEPARTMENT OF SCIENCE SERVICE (DSS)

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

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

REGULATORY STANDARD : BANGKOK METROPOLITAN REGULATIONS FOR THE BUSINESS DISTRIEMENTAL TO HEALTH, B.E. 2530 (1987).

\* : NATIONAL SPA AND POOL INSTITUTE (NSPI).



(MISS CHAWEEVAN BOONLA)  
LABORATORY SUPERVISOR

APRIL 24, 2024

ISO 9001:2015 CERTIFIED  
ISO 14001:2015 CERTIFIED  
BY BSI GROUP (THAILAND) CO.,LTD.

- PROHIBITED TO PARTIALLY COPY ANALYSIS REPORT PRIOR TO WRITTEN PERMISSION BY THE LABORATORY.
- THIS ANALYSIS REPORT APPROVES ONLY FOR THE SAMPLES AS RECEIVED.

1/1

- End of Analysis Report -

