

ภาคผนวก ค

รายงานผลการติดตามตรวจสอบคุณภาพสิ่งแวดล้อม



รายงานผลการติดตามตรวจสอบคุณภาพสิ่งแวดล้อม  
ระยะดำเนินการ



รายงานผลการติดตามตรวจสอบคุณภาพน้ำทิ้ง  
เดือนกรกฎาคม พ.ศ. 2567



## ANALYSIS REPORT

**CUSTOMER NAME** : ENERGY COMPLEX COMPANY LIMITED  
**ADDRESS** : 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 063 997 9715 e-mail : qshe.encony@encony.com  
**SAMPLING SOURCE** : ดิเอนโคนี พื้นที่ ปตท. รังสิต จังหวัดระยอง  
**SAMPLE TYPE** : WATER SUPPLY  
**SAMPLING DATE** : JULY 15, 2024  
**SAMPLING TIME** : 10:25 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR SETTHAWUT EMKLINBUA  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM

**RECEIVED DATE** : JULY 16, 2024  
**ANALYTICAL DATE** : JULY 16-23, 2024  
**ISSUE DATE** : JULY 24, 2024  
**REPORT NO.** : 2024-U068002  
**WORK NO.** : 2023-002256  
**ANALYSIS NO.** : T24AQ079-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			WATER SUPPLY T24AQ079-0009		
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	307	≤ 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 : WATER SUPPLY STANDARDS, NOTIFICATION OF THE PROVINCIAL WATERWORKS AUTHORITY FOLLOW AS WORLD HEALTH ORGANIZATION (WHO) GUIDELINE ISSUE NO.4, A.D.2011; APPENDIX 1, A.D. 2017 (B.E. 2560).

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : ENERGY COMPLEX COMPANY LIMITED  
**ADDRESS** : 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 063 997 9715 e-mail : qshe.encony@encony.com  
**SAMPLING SOURCE** : อาคาร A ดิเจนโคฟี พื้นที่ ปตท. รังสิต จังหวัดระยอง  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : JULY 15, 2024  
**SAMPLING TIME** : 1/  
**SAMPLING METHOD** : GRAB, GRAB AND STERILE TECHNIQUE  
**SAMPLING BY** : MR SETTHAWUT EMKLINBUA  
**ANALYZED BY** : MISS ARIYA THARAROM  
**RECEIVED DATE** : JULY 16, 2024  
**ANALYTICAL DATE** : JULY 16-24, 2024  
**ISSUE DATE** : JULY 30, 2024  
**REPORT NO.** : 2024-U069508  
**WORK NO.** : 2023-002256  
**ANALYSIS NO.** : T24AQ079-0001, T24AQ079-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 09:50 HOUR 1/ T24AQ079-0001	2 09:55 HOUR 1/ T24AQ079-0005		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H <sup>+</sup> B AND 1060 B	7.9 (30°C)	8.0 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	18.8	18.6	≤ 40	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	9.9	5.7	≤ 50	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	442	451	500*	25
SETTLABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	< 0.1	< 0.1	≤ 0.5	0.1
SULPHIDE <sup>b</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sup>2</sup> -F)	< 0.50	< 0.50	≤ 3.0	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	48.9	48.4	≤ 40	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	ND	≤ 20	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 09:50 HOUR 1/ T24AQ079-0001	2 09:55 HOUR 1/ T24AQ079-0005		
MICROBIOLOGY						
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B AND C)	>160,000	>160,000	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	>160,000	160,000	-	1.8
SAMPLE CONDITION						
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 : INFLUENT

RESULT 2 : EFFLUENT

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

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

ND : NOT DETECTED.

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LABORATORY SUPERVISOR

## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ENERGY COMPLEX COMPANY LIMITED	<b>RECEIVED DATE</b>	: JULY 16, 2024
<b>ADDRESS</b>	: 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900	<b>ANALYTICAL DATE</b>	: JULY 16-24, 2024
<b>CONTACT INFORMATION</b>	: TEL : 063 997 9715 e-mail : qshe.encony@encony.com	<b>ISSUE DATE</b>	: JULY 30, 2024
<b>SAMPLING SOURCE</b>	: อาคาร B ดีเอนโคเน่ พื้นที่ ปลดท. วังจันทร์ จังหวัดระยอง	<b>REPORT NO.</b>	: 2024-U069509
<b>SAMPLE TYPE</b>	: WASTEWATER	<b>WORK NO.</b>	: 2023-002256
<b>SAMPLING DATE</b>	: JULY 15, 2024	<b>ANALYSIS NO.</b>	: T24AQ079-0002, T24AQ079-0006
<b>SAMPLING TIME</b>	: 1/		
<b>SAMPLING METHOD</b>	: GRAB, GRAB AND STERILE TECHNIQUE		
<b>SAMPLING BY</b>	: MR SETTHAWUT EMKLINBUA		
<b>ANALYZED BY</b>	: MISS ARIYA THARAROM		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 10:05 HOUR 1/ T24AQ079-0002	2 10:00 HOUR 1/ T24AQ079-0006		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H <sup>+</sup> B AND 1060 B	7.4 (29°C)	7.6 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	102	5.0	≤ 40	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	36.6	5.5	≤ 50	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	509	571	500*	25
SETTLABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	< 0.1	< 0.1	≤ 0.5	0.1
SULPHIDE <sup>b</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sup>2-</sup> F)	1.8	< 0.50	≤ 3.0	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	49.2	5.4	≤ 40	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	20	ND	≤ 20	3





PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 10:05 HOUR 1/ T24AQ079-0002	2 10:00 HOUR 1/ T24AQ079-0006		
MICROBIOLOGY						
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B AND C)	>160,000	17,000	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	>160,000	2,800	-	1.8
SAMPLE CONDITION						
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 : INFLUENT

RESULT 2 : EFFLUENT

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

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

ND : NOT DETECTED.

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[REDACTED SIGNATURE]

LABORATORY SUPERVISOR



## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ENERGY COMPLEX COMPANY LIMITED	<b>RECEIVED DATE</b>	: JULY 16, 2024
<b>ADDRESS</b>	: 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900	<b>ANALYTICAL DATE</b>	: JULY 16-24, 2024
<b>CONTACT INFORMATION</b>	: TEL : 063 997 9715 e-mail : qshe.encony@encony.com	<b>ISSUE DATE</b>	: JULY 30, 2024
<b>SAMPLING SOURCE</b>	: อาคาร C ดิเอนโคนี พื้นที่ ปตท. รังสิต จังหวัดระยอง	<b>REPORT NO.</b>	: 2024-U069510
<b>SAMPLE TYPE</b>	: WASTEWATER	<b>WORK NO.</b>	: 2023-002256
<b>SAMPLING DATE</b>	: JULY 15, 2024	<b>ANALYSIS NO.</b>	: T24AQ079-0003, T24AQ079-0007
<b>SAMPLING TIME</b>	: 1/		
<b>SAMPLING METHOD</b>	: GRAB, GRAB AND STERILE TECHNIQUE		
<b>SAMPLING BY</b>	: MR SETTHAWUT EMKLINBUA		
<b>ANALYZED BY</b>	: MISS ARIYA THARAROM		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 10:20 HOUR 1/ T24AQ079-0003	2 10:15 HOUR 1/ T24AQ079-0007		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H <sup>+</sup> B AND 1060 B	7.6 (31°C)	7.4 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	50.4	2.1	≤ 40	2.0
SUSPENDED SOLIDS <sup>c</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	46.2	ND	≤ 50	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	510	768	500*	25
SETTLEABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	< 0.1	< 0.1	≤ 0.5	0.1
SULPHIDE <sup>b</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sup>2</sup> -F)	0.52	< 0.50	≤ 3.0	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	107	< LOQ	≤ 40	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	9	ND	≤ 20	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 10:20 HOUR 1/ T24AQ079-0003	2 10:15 HOUR 1/ T24AQ079-0007		
MICROBIOLOGY						
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B AND C)	>160,000	7,000	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	>160,000	130	-	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, 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 C, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005.

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

ND : NOT DETECTED.

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

[REDACTED]

LABORATORY SUPERVISOR

## ANALYSIS REPORT

**CUSTOMER NAME** : ENERGY COMPLEX COMPANY LIMITED  
**ADDRESS** : 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 063 997 9715 e-mail : qshe.encony@encony.com  
**SAMPLING SOURCE** : อาคาร D ดีเอนโคณ์ พื้นที่ ปตท. รังสิต จังหวัดระยอง  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : JULY 15, 2024  
**SAMPLING TIME** : 1/  
**SAMPLING METHOD** : GRAB, GRAB AND STERILE TECHNIQUE  
**SAMPLING BY** : MR SETTHAWUT EMKLINBUA  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM  
**RECEIVED DATE** : JULY 16, 2024  
**ANALYTICAL DATE** : JULY 16-24, 2024  
**ISSUE DATE** : JULY 30, 2024  
**REPORT NO.** : 2024-U069512  
**WORK NO.** : 2023-002256  
**ANALYSIS NO.** : T24AQ079-0004, T24AQ079-0008

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 10:35 HOUR 1/ T24AQ079-0004	2 10:30 HOUR 1/ T24AQ079-0008		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H* B AND 1060 B	7.5 (29°C)	7.2 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	67.0	< 2.0	≤ 40	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	39.3	10.9	≤ 50	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	515	301	500*	25
SETTLEABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	< 0.1	< 0.1	≤ 0.5	0.1
SULPHIDE <sup>b</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sup>2</sup> -F)	< 0.50	< 0.50	≤ 3.0	0.50
TOTAL KJELDAHL NITROGEN <sup>c</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	75.2	ND	≤ 40	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	12	ND	≤ 20	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 10:35 HOUR 1/ T24AQ079-0004	2 10:30 HOUR 1/ T24AQ079-0008		
MICROBIOLOGY						
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B AND C)	>160,000	330	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	>160,000	240	-	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, 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 C, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005.

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

ND : NOT DETECTED.

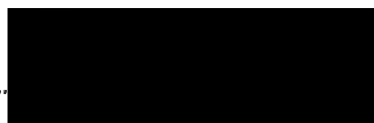
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[REDACTED]  
LABORATORY SUPERVISOR

## ANALYSIS REPORT

**CUSTOMER NAME** : ENERGY COMPLEX COMPANY LIMITED  
**ADDRESS** : 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 063 997 9715 e-mail : qshe.encony@encony.com  
**SAMPLING SOURCE** : -  
**SAMPLE TYPE** : BLANK (EFFLUENT) **RECEIVED DATE** : JULY 16, 2024  
**SAMPLING DATE** : - **ANALYTICAL DATE** : JULY 16-24, 2024  
**SAMPLING TIME** : - **ISSUE DATE** : JULY 30, 2024  
**SAMPLING METHOD** : - **REPORT NO.** : 2024-U069514  
**SAMPLING BY** : MR SETTHAWUT EMKLINBUA **WORK NO.** : 2023-002256  
**ANALYZED BY** : MISS ARIYA THARAROM **ANALYSIS NO.** : 2024-FB0689, 2024-TB0670

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		DETECTION LIMIT
			1 2024-FB0689	2 2024-TB0670	
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	< 2.0	< 2.0	2.0
SUSPENDED SOLIDS	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	ND	5.0
TOTAL DISSOLVED SOLIDS	mg/L	IN-HOUSE METHOD: UAE.TP.WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM: PART 2540 C	ND	ND	25
SETTLABLE SOLIDS	mL/L	IMHOFF CONE (SM: PART 2540 F)	< 0.1	< 0.1	0.1
SULPHIDE	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sub>2</sub> F)	< 0.50	< 0.50	0.50
TOTAL KJELDAHL NITROGEN	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	ND	ND	15
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	ND	3
<b>MICROBIOLOGY</b>					
COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B AND C)	< 1.8	< 1.8	1.8
FAECAL COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	< 1.8	< 1.8	1.8
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR	COLOURLESS/CLEAR	

**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** : FIELD BLANK  
**RESULT 2** : TRIP BLANK  
**ND** : NOT DETECTED.



LABORATORY SUPERVISOR



รายงานผลการติดตามตรวจสอบคุณภาพน้ำทิ้ง  
เดือนสิงหาคม พ.ศ. 2567





## ANALYSIS REPORT

**CUSTOMER NAME** : ENERGY COMPLEX COMPANY LIMITED  
**ADDRESS** : 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 063 997 9715 e-mail : qshe.encony@encony.com  
**SAMPLING SOURCE** : ดิเอนโคพี พื้นที่ ปตท. รังสิต จังหวัดระยอง  
**SAMPLE TYPE** : WATER SUPPLY  
**SAMPLING DATE** : AUGUST 16, 2024  
**SAMPLING TIME** : 09:35 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM

**RECEIVED DATE** : AUGUST 17, 2024  
**ANALYTICAL DATE** : AUGUST 17-23, 2024  
**ISSUE DATE** : AUGUST 26, 2024  
**REPORT NO.** : 2024-U078167  
**WORK NO.** : 2023-002256  
**ANALYSIS NO.** : T24AS660-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			WATER SUPPLY T24AS660-0009		
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	302	≤ 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 : WATER SUPPLY STANDARDS, NOTIFICATION OF THE PROVINCIAL WATERWORKS AUTHORITY FOLLOW  
AS WORLD HEALTH ORGANIZATION (WHO) GUIDELINE ISSUE NO.4, A.D.2011; APPENDIX 1, A.D. 2017 (B.E. 2560).

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(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR





## ANALYSIS REPORT

**CUSTOMER NAME** : ENERGY COMPLEX COMPANY LIMITED  
**ADDRESS** : 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 063 997 9715 e-mail : qshe.encony@encony.com  
**SAMPLING SOURCE** : อาคาร A ดิเอนโคณี พื้นที่ ปตท. รังสิต จังหวัดระยอง  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : AUGUST 16, 2024  
**SAMPLING TIME** : 1/  
**SAMPLING METHOD** : GRAB, GRAB AND STERILE TECHNIQUE  
**SAMPLING BY** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM

**RECEIVED DATE** : AUGUST 17, 2024  
**ANALYTICAL DATE** : AUGUST 17-27, 2024  
**ISSUE DATE** : AUGUST 27, 2024  
**REPORT NO.** : 2024-U078716  
**WORK NO.** : 2023-002256  
**ANALYSIS NO.** : T24AS660-0001, T24AS660-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 09:05 HOUR 1/ T24AS660-0001	2 08:55 HOUR 1/ T24AS660-0005		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H* B AND 1060 B	7.7 (31°C)	7.6 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	45.3	6.8	≤ 40	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	23.9	9.2	≤ 50	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	456	451	500*	25
SETTLABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	< 0.1	< 0.1	≤ 0.5	0.1
SULPHIDE <sup>b</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sup>2</sup> -F)	< 0.50	< 0.50	≤ 3.0	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	67.4	69.4	≤ 40	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	4	ND	≤ 20	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 09:05 HOUR 1/ T24AS660-0001	2 08:55 HOUR 1/ T24AS660-0005		
MICROBIOLOGY						
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221B AND C)	>160,000	>160,000	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221B, C AND E)	>160,000	>160,000	-	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, 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 C, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005.

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

BIOCHEMICAL OXYGEN DEMAND (T24AS660-0005) : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B.5(e).

ND : NOT DETECTED.

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LABORATORY SUPERVISOR

## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ENERGY COMPLEX COMPANY LIMITED	<b>RECEIVED DATE</b>	: AUGUST 17, 2024
<b>ADDRESS</b>	: 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900	<b>ANALYTICAL DATE</b>	: AUGUST 17-27, 2024
<b>CONTACT INFORMATION</b>	: TEL : 063 997 9715 e-mail : qshe.encony@encony.com	<b>ISSUE DATE</b>	: AUGUST 27, 2024
<b>SAMPLING SOURCE</b>	: อาคาร B ดิเอนโคณ์ พื้นที่ ปตท. รังสิต จังหวัดระยอง	<b>REPORT NO.</b>	: 2024-U078718
<b>SAMPLE TYPE</b>	: WASTEWATER	<b>WORK NO.</b>	: 2023-002256
<b>SAMPLING DATE</b>	: AUGUST 16, 2024	<b>ANALYSIS NO.</b>	: T24AS660-0002, T24AS660-0006
<b>SAMPLING TIME</b>	: 1/		
<b>SAMPLING METHOD</b>	: GRAB, GRAB AND STERILE TECHNIQUE		
<b>SAMPLING BY</b>	: MR THANADET WANSANOR		
<b>ANALYZED BY</b>	: MISS NAPAPORN KHUNNOKKHUM		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 08:40 HOUR 1/ T24AS660-0002	2 08:30 HOUR 1/ T24AS660-0006		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H <sup>+</sup> B AND 1060 B	7.0 (31°C)	6.8 (32°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	118	2.0	≤ 40	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	43.1	ND	≤ 50	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	458	555	500*	25
SETTLABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	< 0.1	< 0.1	≤ 0.5	0.1
SULPHIDE <sup>b</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sup>2-</sup> F)	< 0.50	< 0.50	≤ 3.0	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	< LOQ	≤ 40	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	6	ND	≤ 20	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 08:40 HOUR 1/ T24AS660-0002	2 08:30 HOUR 1/ T24AS660-0006		
MICROBIOLOGY						
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B AND C)	>160,000	54,000	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	>160,000	54,000	-	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, 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 C, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005.

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

BIOCHEMICAL OXYGEN DEMAND (T24AS660-0006) : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B.5(e).

ND : NOT DETECTED.

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

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ENERGY COMPLEX COMPANY LIMITED	<b>RECEIVED DATE</b>	: AUGUST 17, 2024
<b>ADDRESS</b>	: 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900	<b>ANALYTICAL DATE</b>	: AUGUST 17-27, 2024
<b>CONTACT INFORMATION</b>	: TEL : 063 997 9715 e-mail : qshe.encony@encony.com	<b>ISSUE DATE</b>	: AUGUST 27, 2024
<b>SAMPLING SOURCE</b>	: อาคาร C ดิเอนโคพี พื้นที่ ปลดท. วั่งจันทร์ จังหวัดระยอง	<b>REPORT NO.</b>	: 2024-U078719
<b>SAMPLE TYPE</b>	: WASTEWATER	<b>WORK NO.</b>	: 2023-002256
<b>SAMPLING DATE</b>	: AUGUST 16, 2024	<b>ANALYSIS NO.</b>	: T24AS660-0003, T24AS660-0007
<b>SAMPLING TIME</b>	: 1/		
<b>SAMPLING METHOD</b>	: GRAB, GRAB AND STERILE TECHNIQUE		
<b>SAMPLING BY</b>	: MR THANADET WANSANOR		
<b>ANALYZED BY</b>	: MISS NAPAPORN KHUNNOKKHUM		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 09:20 HOUR 1/ T24AS660-0003	2 09:10 HOUR 1/ T24AS660-0007		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H <sup>+</sup> B AND 1060 B	7.2 (30°C)	6.2 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	90.0	< 2.0	≤ 40	2.0
SUSPENDED SOLIDS <sup>c</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	33.1	ND	≤ 50	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	503	784	500*	25
SETTLABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	< 0.1	< 0.1	≤ 0.5	0.1
SULPHIDE <sup>b</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sup>2-</sup> F)	2.5	< 0.50	≤ 3.0	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	109	< LOQ	≤ 40	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	5	ND	≤ 20	3





PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 09:20 HOUR 1/ T24AS660-0003	2 09:10 HOUR 1/ T24AS660-0007		
MICROBIOLOGY						
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B AND C)	>160,000	1,100	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	>160,000	1,100	-	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, 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 C, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005.

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

BIOCHEMICAL OXYGEN DEMAND (T24AS660-0007) : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B,5(e).

ND : NOT DETECTED.

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

.....  
[REDACTED]  
LABORATORY SUPERVISOR

## ANALYSIS REPORT

**CUSTOMER NAME** : ENERGY COMPLEX COMPANY LIMITED  
**ADDRESS** : 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 063 997 9715 e-mail : qshe.encony@encony.com  
**SAMPLING SOURCE** : อาคาร D ดีเอนโคพี พื้นที่ ปตท. วังจันทร์ จังหวัดระยอง  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : AUGUST 16, 2024  
**SAMPLING TIME** : 1/  
**SAMPLING METHOD** : GRAB, GRAB AND STERILE TECHNIQUE  
**SAMPLING BY** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM  
**RECEIVED DATE** : AUGUST 17, 2024  
**ANALYTICAL DATE** : AUGUST 17-27, 2024  
**ISSUE DATE** : AUGUST 27, 2024  
**REPORT NO.** : 2024-U078720  
**WORK NO.** : 2023-002256  
**ANALYSIS NO.** : T24AS660-0004, T24AS660-0008

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 09:30 HOUR 1/ T24AS660-0004	2 09:25 HOUR 1/ T24AS660-0008		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H <sup>+</sup> B AND 1060 B	7.3 (30°C)	6.5 (31°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	110	2.3	≤ 40	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	45.3	16.0	≤ 50	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	542	512	500*	25
SETTLABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	< 0.1	< 0.1	≤ 0.5	0.1
SULPHIDE <sup>b</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sup>2-</sup> F)	1.8	< 0.50	≤ 3.0	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	66.1	6.5	≤ 40	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	6	ND	≤ 20	3





PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 09:30 HOUR 1/ T24AS660-0004	2 09:25 HOUR 1/ T24AS660-0008		
MICROBIOLOGY						
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B AND C)	>160,000	35,000	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	>160,000	4,600	-	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, 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 C, NOTIFICATION OF THE MINISTRY OF RESOURCES AND ENVIRONMENT, PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 122, PART 125 D, DATED DECEMBER 29, 2005.

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

BIOCHEMICAL OXYGEN DEMAND (T24AS660-0008) : ADDITION OF NITRIFICATION INHIBITION (TCMP) FOLLOW TO THE SM: 5210B.5(e).

ND : NOT DETECTED.

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LABORATORY SUPERVISOR

## ANALYSIS REPORT

**CUSTOMER NAME** : ENERGY COMPLEX COMPANY LIMITED  
**ADDRESS** : 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 063 997 9715 e-mail : qshe.encony@encony.com  
**SAMPLING SOURCE** : -  
**SAMPLE TYPE** : BLANK (EFFLUENT) **RECEIVED DATE** : AUGUST 17, 2024  
**SAMPLING DATE** : - **ANALYTICAL DATE** : AUGUST 17-27, 2024  
**SAMPLING TIME** : - **ISSUE DATE** : AUGUST 27, 2024  
**SAMPLING METHOD** : - **REPORT NO.** : 2024-U078724  
**SAMPLING BY** : - **WORK NO.** : 2023-002256  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM **ANALYSIS NO.** : 2024-FB0807, 2024-TB0788

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		DETECTION LIMIT
			1 2024-FB0807	2 2024-TB0788	
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	< 2.0	< 2.0	2.0
SUSPENDED SOLIDS	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	ND	5.0
TOTAL DISSOLVED SOLIDS	mg/L	IN-HOUSE METHOD: UAE.TP.WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM: PART 2540 C	ND	ND	25
SETTLEABLE SOLIDS	mL/L	IMHOFF CONE (SM: PART 2540 F)	< 0.1	< 0.1	0.1
SULPHIDE	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sub>2</sub> F)	< 0.50	< 0.50	0.50
TOTAL KJELDAHL NITROGEN	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	ND	ND	1.5
FAT, OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	ND	3
<b>MICROBIOLOGY</b>					
COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B AND C)	< 1.8	< 1.8	1.8
FAECAL COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	< 1.8	< 1.8	1.8
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR -	COLOURLESS/CLEAR -	

**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** : FIELD BLANK  
**RESULT 2** : TRIP BLANK  
**ND** : NOT DETECTED.

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LABORATORY SUPERVISOR



รายงานผลการติดตามตรวจสอบคุณภาพน้ำทิ้ง  
เดือนกันยายน พ.ศ. 2567



## ANALYSIS REPORT

**CUSTOMER NAME** : ENERGY COMPLEX COMPANY LIMITED  
**ADDRESS** : 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 063 997 9715 e-mail : qshe.encony@encony.com  
**SAMPLING SOURCE** : ดิเอนโคนี พื้นที่ ปตท. วังจันทร์ จังหวัดระยอง  
**SAMPLE TYPE** : WATER SUPPLY  
**SAMPLING DATE** : SEPTEMBER 16, 2024  
**SAMPLING TIME** : 11:05 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR SETTHAWUT EMKLINBUA  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM

**RECEIVED DATE** : SEPTEMBER 17, 2024  
**ANALYTICAL DATE** : SEPTEMBER 17-19, 2024  
**ISSUE DATE** : SEPTEMBER 25, 2024  
**REPORT NO.** : 2024-U089217  
**WORK NO.** : 2023-002256  
**ANALYSIS NO.** : T24AV509-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			WATER SUPPLY T24AV509-0009		
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	290	≤ 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 : WATER SUPPLY STANDARDS, NOTIFICATION OF THE PROVINCIAL WATERWORKS AUTHORITY FOLLOW AS WORLD HEALTH ORGANIZATION (WHO) GUIDELINE ISSUE NO.4, A.D.2011; APPENDIX 1, A.D. 2017 (B.E. 2560).

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR



## ANALYSIS REPORT

**CUSTOMER NAME** : ENERGY COMPLEX COMPANY LIMITED  
**ADDRESS** : 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 063 997 9715 e-mail : qshe.encony@encony.com  
**SAMPLING SOURCE** : อาคาร A ดิเอนโคนี พื้นที่ ปลดท. รังจันทร จังหรัระของ  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : SEPTEMBER 16, 2024  
**SAMPLING TIME** : 1/  
**SAMPLING METHOD** : GRAB, GRAB AND STERILE TECHNIQUE  
**SAMPLING BY** : MR SETTHAWUT EMKLINBUA  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM

**RECEIVED DATE** : SEPTEMBER 17, 2024  
**ANALYTICAL DATE** : SEPTEMBER 17-24, 2024  
**ISSUE DATE** : SEPTEMBER 25, 2024  
**REPORT NO.** : 2024-U089218  
**WORK NO.** : 2023-002256  
**ANALYSIS NO.** : T24AV509-0001, T24AV509-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 10:35 HOUR 1/ T24AV509-0001	2 10:30 HOUR 1/ T24AV509-0005		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H <sup>+</sup> B AND 1060 B	7.9 (30.8°C)	7.7 (30.9°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	24.4	6.2	≤ 40	2.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	14.7	6.6	≤ 50	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	442	413	≤ 1,300	25
SETTLEABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	< 0.1	< 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	40.4	26.5	≤ 40	1.5
OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	ND	≤ 20	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 10:35 HOUR 1/ T24AV509-0001	2 10:30 HOUR 1/ T24AV509-0005		
MICROBIOLOGY						
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B AND C)	>160,000	24,000	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	>160,000	24,000	-	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, 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 C, 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.

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[REDACTED]  
LABORATORY SUPERVISOR



## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ENERGY COMPLEX COMPANY LIMITED	<b>RECEIVED DATE</b>	: SEPTEMBER 17, 2024
<b>ADDRESS</b>	: 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900	<b>ANALYTICAL DATE</b>	: SEPTEMBER 17-24, 2024
<b>CONTACT INFORMATION</b>	: TEL : 063 997 9715 e-mail : qshe.encony@encony.com	<b>ISSUE DATE</b>	: SEPTEMBER 25, 2024
<b>SAMPLING SOURCE</b>	: อาคาร B ดิเจนโคซี่ พื้นที่ ปลดท. รังสิต จังหวัดระยอง	<b>REPORT NO.</b>	: 2024-U089219
<b>SAMPLE TYPE</b>	: WASTEWATER	<b>WORK NO.</b>	: 2023-002256
<b>SAMPLING DATE</b>	: SEPTEMBER 16, 2024	<b>ANALYSIS NO.</b>	: T24AV509-0002, T24AV509-0006
<b>SAMPLING TIME</b>	: 1/		
<b>SAMPLING METHOD</b>	: GRAB, GRAB AND STERILE TECHNIQUE		
<b>SAMPLING BY</b>	: MR SETTHAWUT EMKLINBUA		
<b>ANALYZED BY</b>	: MISS NAPAPORN KHUNNOKKHUM		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 10:40 HOUR 1/ T24AV509-0002	2 10:25 HOUR 1/ T24AV509-0006		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H* B AND 1060 B	7.4 (30.1°C)	7.8 (30.7°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	135	6.2	≤ 40	2.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	18.0	6.1	≤ 50	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	453	560	≤ 1,300	25
SETTLEABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	< 0.1	< 0.1	-	0.1
SULPHIDE <sup>c</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sup>2</sup> -F)	3.1	< 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	55.4	6.2	≤ 40	1.5
OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	5	ND	≤ 20	3





PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 10:40 HOUR 1/ T24AV509-0002	2 10:25 HOUR 1/ T24AV509-0006		
MICROBIOLOGY						
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B AND C)	>160,000	700	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B, C AND E)	>160,000	330	-	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, 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 C, 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.

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[REDACTED]  
LABORATORY SUPERVISOR

## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ENERGY COMPLEX COMPANY LIMITED	<b>RECEIVED DATE</b>	: SEPTEMBER 17, 2024
<b>ADDRESS</b>	: 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900	<b>ANALYTICAL DATE</b>	: SEPTEMBER 17-24, 2024
<b>CONTACT INFORMATION</b>	: TEL : 063 997 9715 e-mail : qshe.encony@encony.com	<b>ISSUE DATE</b>	: SEPTEMBER 25, 2024
<b>SAMPLING SOURCE</b>	: อาคาร C ดิเอนโคนี พื้นที่ ปตท. รังสิต จังหวัดระยอง	<b>REPORT NO.</b>	: 2024-U089220
<b>SAMPLE TYPE</b>	: WASTEWATER	<b>WORK NO.</b>	: 2023-002256
<b>SAMPLING DATE</b>	: SEPTEMBER 16, 2024	<b>ANALYSIS NO.</b>	: T24AV509-0003, T24AV509-0007
<b>SAMPLING TIME</b>	: 1/		
<b>SAMPLING METHOD</b>	: GRAB, GRAB AND STERILE TECHNIQUE		
<b>SAMPLING BY</b>	: MR SETTHAWUT EMKLINBUA		
<b>ANALYZED BY</b>	: MISS NAPAPORN KHUNNOKKHUM		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 10:50 HOUR 1/ T24AV509-0003	2 10:45 HOUR 1/ T24AV509-0007		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H <sup>+</sup> B AND 1060 B	7.8 (30.0°C)	7.2 (30.0°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	115	3.8	≤ 40	2.0
TOTAL SUSPENDED SOLIDS <sup>c</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	39.0	ND	≤ 50	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	502	685	≤ 1,300	25
SETTLEABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	< 0.1	< 0.1	-	0.1
SULPHIDE <sup>b</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sup>2-</sup> F)	2.2	< 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN <sup>c</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: PART 4500-Norg C	101	ND	≤ 40	1.5
OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	4	ND	≤ 20	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 10:50 HOUR 1/ T24AV509-0003	2 10:45 HOUR 1/ T24AV509-0007		
MICROBIOLOGY						
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221B AND C)	>160,000	7,900	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221B, C AND E)	>160,000	4,900	-	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, 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 C, 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.



LABORATORY SUPERVISOR

## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ENERGY COMPLEX COMPANY LIMITED	<b>RECEIVED DATE</b>	: SEPTEMBER 17, 2024
<b>ADDRESS</b>	: 555/1 VIBHAVADI-RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900	<b>ANALYTICAL DATE</b>	: SEPTEMBER 17-24, 2024
<b>CONTACT INFORMATION</b>	: TEL : 063 997 9715 e-mail : qshe.encony@encony.com	<b>ISSUE DATE</b>	: SEPTEMBER 25, 2024
<b>SAMPLING SOURCE</b>	: อาคาร D ดิเอนโคน์ พื้นที่ ปตท. รังสิต จังหัดระยอง	<b>REPORT NO.</b>	: 2024-U089221
<b>SAMPLE TYPE</b>	: WASTEWATER	<b>WORK NO.</b>	: 2023-002256
<b>SAMPLING DATE</b>	: SEPTEMBER 16, 2024	<b>ANALYSIS NO.</b>	: T24AV509-0004, T24AV509-0008
<b>SAMPLING TIME</b>	: 1/		
<b>SAMPLING METHOD</b>	: GRAB, GRAB AND STERILE TECHNIQUE		
<b>SAMPLING BY</b>	: MR SETTHAWUT EMKLINBUA		
<b>ANALYZED BY</b>	: MISS NAPAPORN KHUNNOKKHUM		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 11:00 HOUR 1/ T24AV509-0004	2 10:55 HOUR 1/ T24AV509-0008		
pH <sup>a</sup>	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500-H <sup>+</sup> B AND 1060 B	7.7 (30.1°C)	7.3 (30.2°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	95.6	2.8	≤ 40	2.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	29.7	16.2	≤ 50	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	493	430	≤ 1,300	25
SETTLABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: PART 2540 F)	< 0.1	< 0.1	-	0.1
SULPHIDE <sup>b</sup>	mg/L	IODOMETRIC METHOD (SM: PART 4500-S <sup>2</sup> -F)	2.4	< 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	61.1	< LOQ	≤ 40	1.5
OIL AND GREASE <sup>c</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	3	ND	≤ 20	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		REGULATORY STANDARD	DETECTION LIMIT
			1 11:00 HOUR 1/ T24AV509-0004	2 10:55 HOUR 1/ T24AV509-0008		
MICROBIOLOGY						
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221B AND C)	>160,000	3,300	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221B, C AND E)	>160,000	2,400	-	1.8
SAMPLE CONDITION						
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 : INFLUENT

RESULT 2 : EFFLUENT

REGULATORY STANDARD : RANGE OR MAXIMUM PERMITTED VALUE FOR BUILDING EFFLUENT STANDARDS CLASS C, 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.

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

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LABORATORY SUPERVISOR