

## Catalog

ก1_ผลการติดตามตรวจสอบคุณภาพน้ำทิ้ง.....	1
ก2_ผลการติดตามตรวจสอบคุณภาพน้ำประปา.....	32
ก3_ผลการติดตามตรวจสอบเชื้อลี้จิโอเนลลาจากท่อน้ำทิ้งของระบบเครื่องปรับอากาศ.....	36

ภาคผนวก



ภาคผนวก ก  
ผลการติดตามตรวจสอบคุณภาพสิ่งแวดล้อม

---

ภาคผนวก ก1  
ผลการติดตามตรวจสอบคุณภาพน้ำทิ้ง

---

## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
(42/1 MOO 1 SUKHUMVIT ROAD KM.124 TUNGSUKLA SRIRACHA CHONBURI 20230.)  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : JANUARY 12, 2022  
**SAMPLING TIME** : 13:35 HOUR  
**SAMPLING METHOD °** : GRAB, GRAB AND STERILE TECHNIQUE  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JANUARY 13, 2022  
**ANALYTICAL DATE** : JANUARY 13-19, 2022  
**REPORT NO.** : 2022-U004808  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AA598-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			บิเวกเจดปลอย น้ำเสียมก่อนเข้า ระบบบำบัดน้ำเสียม T22AA598-0002	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.4 (29°C)	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	31.4	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	13.8	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	IN-HOUSE METHOD: UAE.TP.WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM 2540 C	338	25
SETTLEABLE SOLIDS °	mL/L	IMHOFF CONE (SM: 2540 F)	< 0.1	0.1
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S° F)	2.94	0.50
TOTAL KJELDAHL NITROGEN °	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	49.8	1.5
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			บริเวณจุดปล่อย น้ำเสียก่อนเข้า ระบบบำบัดน้ำเสีย T22AA598-0002	
MICROBIOLOGY				
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	>160,000	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	1.8
SAMPLE CONDITION				
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.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

JANUARY 24, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
 (42/1 MOO 1 SUKHUMVIT ROAD KM.124 TUNGSUKLA SRIRACHA CHONBURI 20230.)  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : FEBRUARY 9, 2022  
**SAMPLING TIME** : 12:00 HOUR  
**SAMPLING METHOD °** : GRAB, GRAB AND STERILE TECHNIQUE  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : FEBRUARY 10, 2022  
**ANALYTICAL DATE** : FEBRUARY 10-18, 2022  
**REPORT NO.** : 2022-U012066  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AC346-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			บริเวณจุดปล่อย น้ำเสียก่อนเข้า ระบบบำบัดน้ำเสีย T22AC346-0002	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.3 (29°C)	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	47.6	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	214	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	IN-HOUSE METHOD: UAE.TP.WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM 2540 C	342	25
SETTLEABLE SOLIDS °	mL/L	IMHOFF CONE (SM: 2540 F)	0.2	0.1
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S²- F)	4.06	0.50
TOTAL KJELDAHL NITROGEN °	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	59.5	1.5
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			บริเวณจุดปล่อยน้ำเสียก่อนเข้าระบบบำบัดน้ำเสีย T22AC346-0002	
MICROBIOLOGY				
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	>160,000	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	1.8
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/TURBID	
SEDIMENT			YELLOW	

<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.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 21, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED

**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK  
BANGKOK 10900

**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com

**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
(42/1 MOO 1 SUKHUMVIT ROAD KM.124 TUNGSUKLA SRIRACHA CHONBURI 20230.)

**SAMPLE TYPE** : WASTEWATER

**SAMPLING DATE** : MARCH 9, 2022

**SAMPLING TIME** : 15:06 HOUR

**SAMPLING METHOD** : GRAB, GRAB AND STERILE TECHNIQUE

**SAMPLING BY** : MR THANADET WANSANOR

**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MARCH 10, 2022

**ANALYTICAL DATE** : MARCH 10-17, 2022

**REPORT NO.** : 2022-U020261

**WORK NO.** : 2021-003222

**ANALYSIS NO.** : T22AE492-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			จุดปล่อยน้ำเสีย ก่อนเข้าระบบ บำบัดน้ำเสีย T22AE492-0002	
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.7 (30°C)	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	60.4	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	28.5	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 2540 C	296	25
SETTLABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: 2540 F)	< 0.1	0.1
SULPHIDE <sup>c</sup>	mg/L	IODOMETRIC METHOD (SM: 4500-S <sup>2-</sup> F)	1.25	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	< LOQ	1.5
FAT, OIL AND GREASE <sup>a</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			จุดปล่อยน้ำเสีย ก่อนเข้าระบบ บำบัดน้ำเสีย T22AE492-0002	
MICROBIOLOGY				
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	>160,000	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	1.8
SAMPLE CONDITION				
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.

ND : NON-DETECTABLE

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

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MARCH 23, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED (42/1 MOO 1 SUKHUMVIT ROAD KM.124 TUNGSKULA SRIRACHA CHONBURI 20230.)  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : APRIL 4, 2022  
**SAMPLING TIME** : 15:50 HOUR  
**SAMPLING METHOD** : GRAB, GRAB AND STERILE TECHNIQUE  
**SAMPLING BY** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE  
**RECEIVED DATE** : APRIL 4, 2022  
**ANALYTICAL DATE** : APRIL 4-11, 2022  
**REPORT NO.** : 2022-U027096  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AG431-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			จุดปล่อยน้ำเสีย ก่อนเข้าระบบ บำบัดน้ำเสีย T22AG431-0002	
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.0 (30°C)	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	70.2	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	22.6	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 2540 C	360	25
SETTLEABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: 2540 F)	< 0.1	0.1
SULPHIDE <sup>c</sup>	mg/L	IODOMETRIC METHOD (SM: 4500-S <sup>2-</sup> F)	4.25	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	60.8	1.5
FAT, OIL AND GREASE <sup>a</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			จุดปล่อยน้ำเสีย ก่อนเข้าระบบ บำบัดน้ำเสีย T22AG431-0002	
MICROBIOLOGY				
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	>160,000	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	1.8
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			GREY/TURBID	
SEDIMENT			GREY	

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

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

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

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

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 18, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
 (42/1 MOO 1 SUKHUMVIT ROAD KM.124 TUNGSUKLA SRIRACHA CHONBURI 20230.)  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : MAY 11, 2022  
**SAMPLING TIME** : 14:45 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB, GRAB AND STERILE TECHNIQUE  
**SAMPLING BY <sup>c</sup>** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MAY 11, 2022  
**ANALYTICAL DATE** : MAY 11-20, 2022  
**REPORT NO.** : 2022-U037654  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AI884-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			จุดปล่อยน้ำเสียก่อนเข้า ระบบบำบัดน้ำเสีย T22AI884-0002	
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.5 (29°C)	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	84.8	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	19.6	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 2540 C	318	25
SETTLABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: 2540 F)	< 0.1	0.1
SULPHIDE <sup>c</sup>	mg/L	IODOMETRIC METHOD (SM: 4500-S <sup>2-</sup> F)	1.66	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	60.8	1.5
FAT, OIL AND GREASE <sup>a</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
<b>MICROBIOLOGY</b>				
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	>160,000	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	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.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MAY 24, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
 (42/1 MOO 1 SUKHUMVIT ROAD KM.124 TUNGSUKLA SRIRACHA CHONBURI 20230.)  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : JUNE 6, 2022  
**SAMPLING TIME** : 13:10 HOUR  
**SAMPLING METHOD** : GRAB, GRAB AND STERILE TECHNIQUE  
**SAMPLING BY** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JUNE 6, 2022  
**ANALYTICAL DATE** : JUNE 6-14, 2022  
**REPORT NO.** : 2022-U045082  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AK777-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			จุดปล่อยน้ำเสียก่อน เข้าระบบบำบัดน้ำเสีย T22AK777-0002	
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.1 (31°C)	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	66.4	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	25.3	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 2540 C	338	25
SETTLEABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: 2540 F)	< 0.1	0.1
SULPHIDE <sup>b</sup>	mg/L	IODOMETRIC METHOD (SM: 4500-S <sup>2-</sup> F)	1.7	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	66.9	1.5
FAT, OIL AND GREASE <sup>a</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
MICROBIOLOGY				
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	>160,000	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	>160,000	1.8
SAMPLE CONDITION			YELLOW/TURBID	
WATER'S COLOUR/TURBID			BROWN	
SEDIMENT				

<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.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

JUNE 16, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
(42/1 MOO 1 SUKHUMVIT ROAD KM.124 TUNGSUKLA SRIRACHA CHONBURI 20230.)  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JANUARY 12, 2022  
**SAMPLING TIME** : 13:20 HOUR  
**SAMPLING METHOD** : GRAB, GRAB AND STERILE TECHNIQUE  
**SAMPLING BY** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE  
**RECEIVED DATE** : JANUARY 13, 2022  
**ANALYTICAL DATE** : JANUARY 13-19, 2022  
**REPORT NO.** : 2022-U004809  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AA598-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บริเวณปล่อยน้ำทิ้ง (EFFLUENT TANK) T22AA598-0003		
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.0 (28°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	ND	≤ 30	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	5.5	≤ 40	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM 2540 C	406	500*	25
SETTLEABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: 2540 F)	< 0.1	≤ 0.5	0.1
SULPHIDE <sup>c</sup>	mg/L	IODOMETRIC METHOD (SM: 4500-S <sup>2-</sup> F)	ND	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	< LOQ	≤ 35	1.5
FAT, OIL AND GREASE <sup>a</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บริเวณปล่อยน้ำทิ้ง (EFFLUENT TANK) T22AA598-0003		
MICROBIOLOGY					
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221B)	790	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221E)	170	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			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.

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.

500\* : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED  
(TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1,000 mg/L).

ND : NON-DETECTABLE.

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

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

JANUARY 24, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED

**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900

**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com

**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
(42/1 MOO 1 SUKHUMVIT ROAD KM.124 TUNGSKULA SRIRACHA CHONBURI 20230.)

**SAMPLE TYPE** : EFFLUENT

**SAMPLING DATE** : FEBRUARY 9, 2022

**SAMPLING TIME** : 12:30 HOUR

**SAMPLING METHOD** : GRAB, GRAB AND STERILE TECHNIQUE

**SAMPLING BY** : MR THANADET WANSANOR

**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : FEBRUARY 10, 2022

**ANALYTICAL DATE** : FEBRUARY 10-18, 2022

**REPORT NO.** : 2022-U012067

**WORK NO.** : 2021-003222

**ANALYSIS NO.** : T22AC346-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บริเวณบ่อพักน้ำทิ้ง (EFFLUENT TANK) T22AC346-0003		
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	6.9 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	ND	≤ 30	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	6.3	≤ 40	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM 2540 C	340	500*	25
SETTLABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: 2540 F)	< 0.1	≤ 0.5	0.1
SULPHIDE <sup>c</sup>	mg/L	IODOMETRIC METHOD (SM: 4500-S <sup>2-</sup> F)	ND	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	5.0	≤ 35	1.5
FAT, OIL AND GREASE <sup>a</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บริเวณบ่อพักน้ำทิ้ง (EFFLUENT TANK) T22AC346-0003		
MICROBIOLOGY					
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	790	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	490	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			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.

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.

500\* : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED  
(TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1,000 mg/L).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 21, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
(42/1 MOO 1 SUKHUMVIT ROAD KM.124 TUNGSUKLA SRIRACHA CHONBURI 20230.)  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MARCH 9, 2022  
**SAMPLING TIME** : 15:17 HOUR  
**SAMPLING METHOD °** : GRAB, GRAB AND STERILE TECHNIQUE  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MARCH 10, 2022  
**ANALYTICAL DATE** : MARCH 10-17, 2022  
**REPORT NO.** : 2022-U020264  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AE492-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บริเวณปล่อยน้ำทิ้ง (EFFLUENT TANK) T22AE492-0003		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	6.7 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	ND	≤ 30	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	≤ 40	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	IN-HOUSE METHOD: UAE.TP.WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103- 105 °C); SM 2540 C	310	500*	25
SETTLABLE SOLIDS °	mL/L	IMHOFF CONE (SM: 2540 F)	< 0.1	≤ 0.5	0.1
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S² F)	ND	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN °	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	6.7	≤ 35	1.5
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บริเวณปล่อยน้ำทิ้ง (EFFLUENT TANK) T22AE492-0003		
MICROBIOLOGY					
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	220	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	110	-	1.8
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			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.

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.

500\* : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED  
(TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1,000 mg/L).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MARCH 23, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
(42/1 MOO 1 SUKHUMVIT ROAD KM.124 TUNGSUKLA SRIRACHA CHONBURI 20230.)  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : APRIL 4, 2022  
**SAMPLING TIME** : 16:00 HOUR  
**SAMPLING METHOD °** : GRAB, GRAB AND STERILE TECHNIQUE  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTAALEE

**RECEIVED DATE** : APRIL 4, 2022  
**ANALYTICAL DATE** : APRIL 4-11, 2022  
**REPORT NO.** : 2022-U027097  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AG431-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บริเวณปล่อยน้ำทิ้ง (EFFLUENT TANK) T22AG431-0003		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	6.6 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	2.0	≤ 30	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	6.4	≤ 40	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	IN-HOUSE METHOD: UAE.TP.WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103- 105 °C); SM 2540 C	354	500*	25
SETTLABLE SOLIDS °	mL/L	IMHOFF CONE (SM: 2540 F)	< 0.1	≤ 0.5	0.1
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S² F)	ND	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN °	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	< LOQ	≤ 35	1.5
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บริเวณบ่อพักน้ำทิ้ง (EFFLUENT TANK) T22AG431-0003		
MICROBIOLOGY					
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	79	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	33	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			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.

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.

500\* : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED  
(TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1,000 mg/L).

ND : NON-DETECTABLE.

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

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 18, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
(42/1 MOO 1 SUKHUMVIT ROAD KM.124 TUNGSUKLA SRIRACHA CHONBURI 20230.)  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MAY 11, 2022  
**SAMPLING TIME** : 14:20 HOUR  
**SAMPLING METHOD °** : GRAB, GRAB AND STERILE TECHNIQUE  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MAY 11, 2022  
**ANALYTICAL DATE** : MAY 11-20, 2022  
**REPORT NO.** : 2022-U037655  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AI884-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บริเวณบ่อพักน้ำทิ้ง (EFFLUENT TANK) T22AI884-0003		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.5 (29°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	2.0	≤ 30	2.0
SUSPENDED SOLIDS °	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	7.9	≤ 40	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	IN-HOUSE METHOD: UAE.TP.WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103- 105 °C); SM 2540 C	205	500*	25
SETTLEABLE SOLIDS °	mL/L	IMHOFF CONE (SM: 2540 F)	< 0.1	≤ 0.5	0.1
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S² F)	ND	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN °	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	< LOQ	≤ 35	1.5
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บริเวณบ่อพักน้ำทิ้ง (EFFLUENT TANK) T22AI884-0003		
MICROBIOLOGY					
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	4,900	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	940	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/CLEAR		
SEDIMENT			YELLOW		

<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.

500\* : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED  
(TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1,000 mg/L).

ND : NON-DETECTABLE.

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

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MAY 24, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED (42/1 MOO 1 SUKHUMVIT ROAD KM.124 TUNGSUKLA SRIRACHA CHONBURI 20230.)  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JUNE 6, 2022  
**SAMPLING TIME** : 13:05 HOUR  
**SAMPLING METHOD** : GRAB, GRAB AND STERILE TECHNIQUE  
**SAMPLING BY** : MR NAPASIT SRIPIIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE  
**RECEIVED DATE** : JUNE 6, 2022  
**ANALYTICAL DATE** : JUNE 6-14, 2022  
**REPORT NO.** : 2022-U045083  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AK777-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บริเวณบ่อพักน้ำทิ้ง (EFFLUENT TANK) T22AK777-0003		
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.1 (30°C)	5-9	-
BIOCHEMICAL OXYGEN DEMAND <sup>c</sup>	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	2.0	≤ 30	2.0
SUSPENDED SOLIDS <sup>a</sup>	mg/L	SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	6.8	≤ 40	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAO.007 (TOTAL DISSOLVED SOLIDS DRIED AT 103-105 °C); SM 2540 C	88	500*	25
SETTLABLE SOLIDS <sup>c</sup>	mL/L	IMHOFF CONE (SM: 2540 F)	< 0.1	≤ 0.5	0.1
SULPHIDE <sup>b</sup>	mg/L	IODOMETRIC METHOD (SM: 4500-S <sup>2-</sup> F)	< 0.50	≤ 1.0	0.50
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	5.6	≤ 35	1.5
FAT, OIL AND GREASE <sup>a</sup>	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	≤ 20	3



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บริเวณบ่อพักน้ำทิ้ง (EFFLUENT TANK) T22AK777-0003		
MICROBIOLOGY					
COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 B)	790	-	1.8
FAECAL COLIFORM BACTERIA <sup>b</sup>	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	490	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			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.

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.

500\* : PERMITTED EXCESS VALUE TO TOTAL DISSOLVED SOLIDS OF ACTUAL TAP WATER USED  
(TOTAL DISSOLVED SOLIDS STANDARD VALUE OF TAP WATER QUALITY IS 1,000 mg/L).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

JUNE 16, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
 (42/1 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSUKLA, SRIRACHA, CHONBURI 20230.)  
**SAMPLE TYPE** : WATER SUPPLY  
**SAMPLING DATE** : JANUARY 12, 2022  
**SAMPLING TIME** : 13:30 HOUR  
**SAMPLING METHOD** : GRAB  
**SAMPLING BY** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS PORNPIMOL WAENTHONG

**RECEIVED DATE** : JANUARY 13, 2022  
**ANALYTICAL DATE** : JANUARY 13-19, 2022  
**REPORT NO.** : 2022-U004807  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AA598-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			PWA T22AA598-0001		
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	153	≤ 600	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, 23<sup>rd</sup> EDITION, 2017.

REGULATORY STANDARD : WATER SUPPLY STANDARDS, NOTIFICATION OF THE PROVINCIAL WATERWORKS AUTHORITY FOLLOW AS WORLD HEALTH ORGANIZATION (WHO) GUIDELINE VALUE, B.E. 2554 (2011).

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

JANUARY 24, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
 (42/1 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSUKLA, SRIRACHA, CHONBURI 20230.)  
**SAMPLE TYPE** : WATER SUPPLY **RECEIVED DATE** : FEBRUARY 10, 2022  
**SAMPLING DATE** : FEBRUARY 9, 2022 **ANALYTICAL DATE** : FEBRUARY 10-12, 2022  
**SAMPLING TIME** : 12:15 HOUR **REPORT NO.** : 2022-U012065  
**SAMPLING METHOD** : GRAB **WORK NO.** : 2021-003222  
**SAMPLING BY** : MR THANADET WANSANOR **ANALYSIS NO.** : T22AC346-0001  
**ANALYZED BY** : MISS PORNPIMOL WAENTHONG

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			PWA T22AC346-0001		
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	155	≤ 600	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, 23<sup>rd</sup> EDITION, 2017.

REGULATORY STANDARD : WATER SUPPLY STANDARDS, NOTIFICATION OF THE PROVINCIAL WATERWORKS AUTHORITY FOLLOW AS WORLD HEALTH ORGANIZATION (WHO) GUIDELINE VALUE, B.E. 2554 (2011).

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 21, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK  
BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
(42/1 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSUKLA, SRIRACHA, CHONBURI 20230.)  
**SAMPLE TYPE** : WATER SUPPLY  
**SAMPLING DATE** : MARCH 9, 2022  
**SAMPLING TIME** : 15:00 HOUR  
**SAMPLING METHOD** : GRAB  
**SAMPLING BY** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS PORNPIMOL WAENTHONG

**RECEIVED DATE** : MARCH 10, 2022  
**ANALYTICAL DATE** : MARCH 10-14, 2022  
**REPORT NO.** : 2022-U020260  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AE492-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			PWA T22AE492-0001		
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	172	≤ 600	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, 23<sup>rd</sup> EDITION, 2017.

REGULATORY STANDARD : WATER SUPPLY STANDARDS, NOTIFICATION OF THE PROVINCIAL WATERWORKS AUTHORITY FOLLOW  
AS WORLD HEALTH ORGANIZATION (WHO) GUIDELINE VALUE, B.E. 2554 (2011).

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MARCH 23, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
(42/1 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSUKLA, SRIRACHA, CHONBURI 20230.)  
**SAMPLE TYPE** : WATER SUPPLY  
**SAMPLING DATE** : APRIL 4, 2022  
**SAMPLING TIME** : 16:10 HOUR  
**SAMPLING METHOD** : GRAB  
**SAMPLING BY** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS PORNPIMOL WAENTHONG

**RECEIVED DATE** : APRIL 4, 2022  
**ANALYTICAL DATE** : APRIL 4-7, 2022  
**REPORT NO.** : 2022-U027095  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AG431-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			PWA T22AG431-0001		
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	164	≤ 600	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, 23<sup>rd</sup> EDITION, 2017.

REGULATORY STANDARD : WATER SUPPLY STANDARDS, NOTIFICATION OF THE PROVINCIAL WATERWORKS AUTHORITY FOLLOW AS WORLD HEALTH ORGANIZATION (WHO) GUIDELINE VALUE, B.E. 2554 (2011).

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 18, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED (42/1 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSAKULA, SRIRACHA, CHONBURI 20230.)  
**SAMPLE TYPE** : WATER SUPPLY **RECEIVED DATE** : MAY 11, 2022  
**SAMPLING DATE** : MAY 11, 2022 **ANALYTICAL DATE** : MAY 11-19, 2022  
**SAMPLING TIME** : 14:35 HOUR **REPORT NO.** : 2022-U037653  
**SAMPLING METHOD <sup>c</sup>** : GRAB **WORK NO.** : 2021-003222  
**SAMPLING BY <sup>c</sup>** : MR NAPASIT SRIPIM **ANALYSIS NO.** : T22AI884-0001  
**ANALYZED BY** : MISS PORNPIMOL WAENTHONG

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			PWA T22AI884-0001		
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	165	≤ 600	25
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR YELLOW		

<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 : WATER SUPPLY STANDARDS, NOTIFICATION OF THE PROVINCIAL WATERWORKS AUTHORITY FOLLOW AS WORLD HEALTH ORGANIZATION (WHO) GUIDELINE VALUE, B.E. 2554 (2011).

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MAY 24, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK  
BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
(42/1 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSUKLA, SRIRACHA, CHONBURI 20230.)  
**SAMPLE TYPE** : WATER SUPPLY  
**SAMPLING DATE** : JUNE 6, 2022  
**SAMPLING TIME** : 13:15 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS PORNPIMOL WAENTHONG

**RECEIVED DATE** : JUNE 6, 2022  
**ANALYTICAL DATE** : JUNE 6-10, 2022  
**REPORT NO.** : 2022-U045080  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AK777-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			PWA T22AK777-0001		
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	192	≤ 600	25
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			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

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

REGULATORY STANDARD : WATER SUPPLY STANDARDS, NOTIFICATION OF THE PROVINCIAL WATERWORKS AUTHORITY FOLLOW  
AS WORLD HEALTH ORGANIZATION (WHO) GUIDELINE VALUE, B.E. 2554 (2011).

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

JUNE 16, 2022



ภาคผนวก ก2  
ผลการติดตามตรวจสอบคุณภาพน้ำประปา

---

## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
(42/1 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSUKLA, SRIRACHA, CHONBURI 20230.)  
**SAMPLE TYPE** : WATER SUPPLY  
**SAMPLING DATE** : MAY 14, 2022  
**SAMPLING TIME** : 09:30 HOUR  
**SAMPLING METHOD <sup>c</sup>** : STERILE TECHNIQUE  
**SAMPLING BY <sup>c</sup>** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS ITSARIYAPORN BUATIB

**RECEIVED DATE** : MAY 14, 2022  
**ANALYTICAL DATE** : MAY 14-19, 2022  
**REPORT NO.** : 2022-U037656  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AJ198-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ทั้งเก็บน้ำใต้ดิน T22AJ198-0001		
MICROBIOLOGY					
COLIFORM BACTERIA <sup>c</sup>	/100 mL	PRESENCE-ABSENCE (P-A) COLIFORM TEST (SM: 9221D)	ABSENCE	ABSENCE	-
<i>E. coli</i> <sup>b</sup>	/100 mL	FLUOROGENIC SUBSTRATE TEST (SM: 9221D AND F)	ABSENCE	ABSENCE	-
<i>Clostridium perfringens</i> <sup>c</sup>	/100 mL	ENVIRONMENT AGENCY, THE MICROBIOLOGY OF DRINKING WATER, 2010 PART 6	NOT DETECTED	-	-
<i>Staphylococcus aureus</i> <sup>c</sup>	/100 mL	MEMBRANE FILTER TECHNIQUE (SM: 9213 B)	NOT DETECTED	-	-
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR		
SEDIMENT			-		

<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 : DRINKING WATER STANDARDS, ISSUED UNDER THE DEPARTMENT OF HEALTH B.E. 2563, (2020).

*Chaweevan B.*

(MISS CHAWEEWAN BOONLA)  
LABORATORY SUPERVISOR

MAY 24, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
(42/1 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSUKLA, SRIRACHA, CHONBURI 20230.)  
**SAMPLE TYPE** : WATER SUPPLY  
**SAMPLING DATE** : MAY 14, 2022  
**SAMPLING TIME** : 09:00 HOUR  
**SAMPLING METHOD <sup>c</sup>** : STERILE TECHNIQUE  
**SAMPLING BY <sup>c</sup>** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS ITSARIYAPORN BUATIB

**RECEIVED DATE** : MAY 14, 2022  
**ANALYTICAL DATE** : MAY 14-19, 2022  
**REPORT NO.** : 2022-U037657  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AJ198-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ถังเก็บน้ำขึ้นตลาดฟ้า จุดที่1 T22AJ198-0002		
MICROBIOLOGY					
COLIFORM BACTERIA <sup>c</sup>	/100 mL	PRESENCE-ABSENCE (P-A) COLIFORM TEST (SM: 9221 D)	ABSENCE	ABSENCE	-
<i>E. coli</i> <sup>b</sup>	/100 mL	FLUOROGENIC SUBSTRATE TEST (SM: 9221 D AND F)	ABSENCE	ABSENCE	-
<i>Clostridium perfringens</i> <sup>c</sup>	/100 mL	ENVIRONMENT AGENCY, THE MICROBIOLOGY OF DRINKING WATER, 2010 PART 6	NOT DETECTED	-	-
<i>Staphylococcus aureus</i> <sup>c</sup>	/100 mL	MEMBRANE FILTER TECHNIQUE (SM: 9213 B)	NOT DETECTED	-	-
SAMPLE CONDITION					
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 : DRINKING WATER STANDARDS, ISSUED UNDER THE DEPARTMENT OF HEALTH B.E. 2563, (2020).

*Chaweewan B.*

(MISS CHAWEEWAN BOONLA)  
LABORATORY SUPERVISOR

MAY 24, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : THAI OIL PUBLIC COMPANY LIMITED  
(42/1 MOO 1, SUKHUMVIT ROAD KM.124, TUNGSAKULA, SRIRACHA, CHONBURI 20230.)  
**SAMPLE TYPE** : WATER SUPPLY  
**SAMPLING DATE** : MAY 14, 2022  
**SAMPLING TIME** : 09:10 HOUR  
**SAMPLING METHOD <sup>c</sup>** : STERILE TECHNIQUE  
**SAMPLING BY <sup>c</sup>** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS ITSARIYAPORN BUATIB  
**RECEIVED DATE** : MAY 14, 2022  
**ANALYTICAL DATE** : MAY 14-19, 2022  
**REPORT NO.** : 2022-U037658  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AJ198-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			ถังเก็บน้ำขึ้นตลาดฟ้า จุดที่2 T22AJ198-0003		
MICROBIOLOGY					
COLIFORM BACTERIA <sup>c</sup>	/100 mL	PRESENCE-ABSENCE (P-A) COLIFORM TEST (SM: 9221D)	ABSENCE	ABSENCE	-
<i>E. coli</i> <sup>b</sup>	/100 mL	FLUOROGENIC SUBSTRATE TEST (SM: 9221D AND F)	ABSENCE	ABSENCE	-
<i>Clostridium perfringens</i> <sup>c</sup>	/100 mL	ENVIRONMENT AGENCY, THE MICROBIOLOGY OF DRINKING WATER, 2010 PART 6	NOT DETECTED	-	-
<i>Staphylococcus aureus</i> <sup>c</sup>	/100 mL	MEMBRANE FILTER TECHNIQUE (SM: 9213 B)	NOT DETECTED	-	-
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR		
			-		

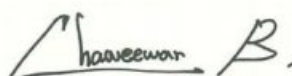
<sup>a</sup> : ISO/IEC 17025 ACCREDITED BY THAI INDUSTRIAL STANDARDS INSTITUTE (TISI)

<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 : DRINKING WATER STANDARDS, ISSUED UNDER THE DEPARTMENT OF HEALTH B.E. 2563, (2020).



(MISS CHAWEEWAN BOONLA)  
LABORATORY SUPERVISOR

MAY 24, 2022



ภาคผนวก ก3  
ผลการติดตามตรวจสอบเชื้อสีจิโอเนลลา  
จากท่อน้ำทิ้งของระบบเครื่องปรับอากาศ


---

## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK  
BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : -  
**SAMPLE TYPE** : COOLING WATER  
**SAMPLING DATE** : MAY 14, 2022  
**SAMPLING TIME** : 11:30 HOUR  
**SAMPLING METHOD** : STERILE TECHNIQUE  
**SAMPLING BY** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MR PITTAPAN LAEKOOD

**RECEIVED DATE** : MAY 14, 2022  
**ANALYTICAL DATE** : MAY 14-23, 2022  
**REPORT NO.** : 2022-U038986  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AJ197-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			เครื่องปรับอากาศในสำนักงานของ โครงการ ชั้น 1 T22AJ197-0001
MICROBIOLOGY			
Legionella spp.	CFU/L	ISO 11731:2017-05 (E)	NOT DETECTED
SAMPLE CONDITION			COLOURLESS/CLEAR BLACK
WATER'S COLOUR/TURBID			
SEDIMENT			



(MISS CHAWEEWAN BOONLA)  
LABORATORY SUPERVISOR

MAY 27, 2022

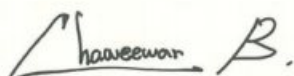


## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK  
BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : -  
**SAMPLE TYPE** : COOLING WATER  
**SAMPLING DATE** : MAY 14, 2022  
**SAMPLING TIME** : 11:15 HOUR  
**SAMPLING METHOD** : STERILE TECHNIQUE  
**SAMPLING BY** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MR PITTAPAN LAEKODD

**RECEIVED DATE** : MAY 14, 2022  
**ANALYTICAL DATE** : MAY 14-23, 2022  
**REPORT NO.** : 2022-U038987  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AJ197-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			เครื่องปรับอากาศในสำนักงานของโครงการ ชื่น 2 T22AJ197-0002
MICROBIOLOGY			
Legionella spp.	CFU/L	ISO 11731:2017-05 (E)	NOT DETECTED
SAMPLE CONDITION			COLOURLESS/CLEAR
WATER'S COLOUR/TURBID			
SEDIMENT			



(MISS CHAWEEWAN BOONLA)  
LABORATORY SUPERVISOR

MAY 27, 2022

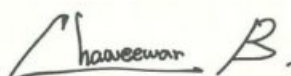


## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK  
BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : -  
**SAMPLE TYPE** : COOLING WATER  
**SAMPLING DATE** : MAY 14, 2022  
**SAMPLING TIME** : 10:59 HOUR  
**SAMPLING METHOD** : STERILE TECHNIQUE  
**SAMPLING BY** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MR PITTAPAN LAEKODD

**RECEIVED DATE** : MAY 14, 2022  
**ANALYTICAL DATE** : MAY 14-23, 2022  
**REPORT NO.** : 2022-U038988  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AJ197-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			เครื่องปรับอากาศในสำนักงานของโครงการ ชื่น 3 T22AJ197-0003
MICROBIOLOGY			
Legionella spp.	CFU/L	ISO 11731:2017-05 (E)	NOT DETECTED
SAMPLE CONDITION			YELLOW/CLEAR -
WATER'S COLOUR/TURBID			
SEDIMENT			



(MISS CHAWEEWAN BOONLA)  
LABORATORY SUPERVISOR

MAY 27, 2022

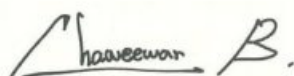


## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK  
BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : -  
**SAMPLE TYPE** : COOLING WATER  
**SAMPLING DATE** : MAY 14, 2022  
**SAMPLING TIME** : 10:50 HOUR  
**SAMPLING METHOD** : STERILE TECHNIQUE  
**SAMPLING BY** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MR PITTAPAN LAEKOOD

**RECEIVED DATE** : MAY 14, 2022  
**ANALYTICAL DATE** : MAY 14-23, 2022  
**REPORT NO.** : 2022-U038989  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AJ197-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			เครื่องปรับอากาศในสำนักงานของโครงการ ชั้น 4 T22AJ197-0004
MICROBIOLOGY			
Legionella spp.	CFU/L	ISO 11731:2017-05 (E)	NOT DETECTED
SAMPLE CONDITION			YELLOW/CLEAR YELLOW
WATER'S COLOUR/TURBID			
SEDIMENT			



(MISS CHAWEEWAN BOONLA)  
LABORATORY SUPERVISOR

MAY 27, 2022

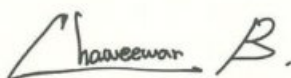


## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK  
BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : -  
**SAMPLE TYPE** : COOLING WATER  
**SAMPLING DATE** : MAY 14, 2022  
**SAMPLING TIME** : 10:30 HOUR  
**SAMPLING METHOD** : STERILE TECHNIQUE  
**SAMPLING BY** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MR PITTAPAN LAEKODD

**RECEIVED DATE** : MAY 14, 2022  
**ANALYTICAL DATE** : MAY 14-23, 2022  
**REPORT NO.** : 2022-U038990  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AJ197-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			เครื่องปรับอากาศในสำนักงานของโครงการ ชั้น 5 T22AJ197-0005
MICROBIOLOGY			
Legionella spp.	CFU/L	ISO 11731:2017-05 (E)	NOT DETECTED
SAMPLE CONDITION			COLOURLESS/CLEAR
WATER'S COLOUR/TURBID			
SEDIMENT			



(MISS CHAWEEWAN BOONLA)  
LABORATORY SUPERVISOR

MAY 27, 2022

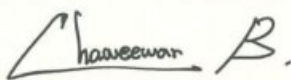


## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK  
 BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : -  
**SAMPLE TYPE** : COOLING WATER  
**SAMPLING DATE** : MAY 14, 2022  
**SAMPLING TIME** : 10:10 HOUR  
**SAMPLING METHOD** : STERILE TECHNIQUE  
**SAMPLING BY** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MR PITTAPAN LAEKOOD

**RECEIVED DATE** : MAY 14, 2022  
**ANALYTICAL DATE** : MAY 14-23, 2022  
**REPORT NO.** : 2022-U038991  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AJ197-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			เครื่องปรับอากาศในสำนักงานของโครงการ ชั้น 6 T22AJ197-0006
MICROBIOLOGY			
Legionella spp.	CFU/L	ISO 11731:2017-05 (E)	NOT DETECTED
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR -



(MISS CHAWEEWAN BOONLA)  
LABORATORY SUPERVISOR

MAY 27, 2022

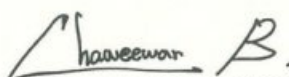


## ANALYSIS REPORT

**CUSTOMER NAME** : THAI OIL PUBLIC COMPANY LIMITED  
**ADDRESS** : 555/1 ENERGY COMPLEX BUILDING A, ELEVENTH FLOOR VIBHAVADI RANGSIT ROAD CHATUCHAK CHATUCHAK  
 BANGKOK 10900  
**CONTACT INFORMATION** : TEL : 0 3840 8500 EXT. 10502 e-mail : kitiya@thaioilgroup.com  
**SAMPLING SOURCE** : -  
**SAMPLE TYPE** : COOLING WATER  
**SAMPLING DATE** : MAY 14, 2022  
**SAMPLING TIME** : 09:50 HOUR  
**SAMPLING METHOD** : STERILE TECHNIQUE  
**SAMPLING BY** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MR PITTAPAN LAEKODD

**RECEIVED DATE** : MAY 14, 2022  
**ANALYTICAL DATE** : MAY 14-22, 2022  
**REPORT NO.** : 2022-U038993  
**WORK NO.** : 2021-003222  
**ANALYSIS NO.** : T22AJ197-0007

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT
			เครื่องปรับอากาศในสำนักงานของ โครงการ ชื่น 7 T22AJ197-0007
MICROBIOLOGY			
Legionella spp.	CFU/L	ISO 11731:2017-05 (E)	NOT DETECTED
<b>SAMPLE CONDITION</b>			
WATER'S COLOUR/TURBID			YELLOW/CLEAR
SEDIMENT			YELLOW



(MISS CHAWEEWAN BOONLA)  
LABORATORY SUPERVISOR

MAY 27, 2022

