

ภาคผนวก ง

ใบรายงานผลการวิเคราะห์





คุณภาพน้ำในแม่น้ำเจ้าพระยา

ANALYSIS REPORT

CUSTOMER NAME : BANGCHAK CORPORATION PUBLIC COMPANY LIMITED
ADDRESS : 210 SUKHUMVIT 64 ROAD PHRA KHANONG TAI PHRA KHANONG BANGKOK 10260
CONTACT INFORMATION : TEL : 0 2335 4303 e-mail : Supawan@bangchak.co.th
SAMPLING SOURCE : ปากคลองบางจาก
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : APRIL 7, 2022
SAMPLING TIME : 10:52 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR PHATSAWUT THOSAKOON
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : APRIL 7, 2022
ANALYTICAL DATE : APRIL 7-18, 2022
REPORT NO. : 2022-U027165
WORK NO. : 2022-000289
ANALYSIS NO. : T22AG682-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ปากคลองบางจาก T22AG682-0001	
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	30	-
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O C)	2.6	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	3.0	1.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	11.5	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	7,827	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
METALS				
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/TURBID	
SEDIMENT			YELLOW	

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

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

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

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

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

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 19, 2022



ANALYSIS REPORT

CUSTOMER NAME : BANGCHAK CORPORATION PUBLIC COMPANY LIMITED
ADDRESS : 210 SUKHUMVIT 64 ROAD PHRA KHANONG TAI PHRA KHANONG BANGKOK 10260
CONTACT INFORMATION : TEL : 0 2335 4303 e-mail : Supawan@bangchak.co.th
SAMPLING SOURCE : ปากคลองบางอ้อ
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : APRIL 7, 2022
SAMPLING TIME : 11:00 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR PHATSAWUT THOSAKOON
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : APRIL 7, 2022
ANALYTICAL DATE : APRIL 7-18, 2022
REPORT NO. : 2022-U027166
WORK NO. : 2022-000289
ANALYSIS NO. : T22AG682-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ปากคลองบางอ้อ T22AG682-0002	
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	30	-
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O C)	2.7	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	2.5	1.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	12.5	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	8,252	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
METALS				
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/TURBID	
SEDIMENT			YELLOW	

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

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

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

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

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

ND : NON-DETECTABLE.

< LOQ : < LEVEL OF QUANTITATION (LEAD ≥ 0.003 AND < 0.100 mg/L).

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 19, 2022



ANALYSIS REPORT

CUSTOMER NAME : BANGCHAK CORPORATION PUBLIC COMPANY LIMITED
ADDRESS : 210 SUKHUMVIT 64 ROAD PHRA KHANONG TAI PHRA KHANONG BANGKOK 10260
CONTACT INFORMATION : TEL : 0 2335 4303 e-mail : Supawan@bangchak.co.th
SAMPLING SOURCE : ท้ายน้ำของโครงการ
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : APRIL 7, 2022
SAMPLING TIME : 11:05 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR PHATSAWUT THOSAKOON
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : APRIL 7, 2022
ANALYTICAL DATE : APRIL 7-18, 2022
REPORT NO. : 2022-U027168
WORK NO. : 2022-000289
ANALYSIS NO. : T22AG682-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ท้ายน้ำของโครงการ T22AG682-0003	
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	30	-
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O C)	2.1	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	3.0	1.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	13.4	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	8,327	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
METALS				
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/TURBID	
SEDIMENT			YELLOW	

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

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

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

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

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

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 19, 2022



ANALYSIS REPORT

CUSTOMER NAME : BANGCHAK CORPORATION PUBLIC COMPANY LIMITED
ADDRESS : 210 SUKHUMVIT 64 ROAD PHRA KHANONG TAI PHRA KHANONG BANGKOK 10260
CONTACT INFORMATION : TEL : 0 2335 4303 e-mail : Supawan@bangchak.co.th
SAMPLING SOURCE : หน้าโรงกลั่นบางจากบริเวณ ระหว่างท่าเทียบเรือหมายเลข 18C กับ 18D
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : APRIL 7, 2022
SAMPLING TIME : 10:57 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR PHATSAWUT THOSAKOON
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : APRIL 7, 2022
ANALYTICAL DATE : APRIL 7-18, 2022
REPORT NO. : 2022-U027170
WORK NO. : 2022-000289
ANALYSIS NO. : T22AG682-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			หน้าโรงกลั่นบางจากบริเวณ ระหว่างท่าเทียบเรือหมายเลข 18C กับ 18D T22AG682-0004	
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	30	-
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O C)	2.3	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	3.0	1.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	11.9	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	7,757	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
METALS				
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/TURBID	
SEDIMENT			YELLOW	

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

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

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

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

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

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 19, 2022



ANALYSIS REPORT

CUSTOMER NAME : BANGCHAK CORPORATION PUBLIC COMPANY LIMITED
ADDRESS : 210 SUKHUMVIT 64 ROAD PHRA KHANONG TAI PHRA KHANONG BANGKOK 10260
CONTACT INFORMATION : TEL : 0 2335 4303 e-mail : Supawan@bangchak.co.th
SAMPLING SOURCE : ปากคลองบางจาก
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : AUGUST 1, 2022
SAMPLING TIME : 11:40 HOUR
SAMPLING METHOD ^c : GRAB
SAMPLING BY ^c : MR PHATSAWUT THOSAKOON
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : AUGUST 1, 2022
ANALYTICAL DATE : AUGUST 1-8, 2022
REPORT NO. : 2022-U061354
WORK NO. : 2022-000289
ANALYSIS NO. : T22A0969-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ปากคลองบางจาก T22A0969-0001	
TEMPERATURE ^c	°C	THERMOMETER AT SITE (SM: 2550 B)	29	-
DISSOLVED OXYGEN ^c	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O C)	3.8	0.5
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	1.9	1.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	58.0	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	209	25
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
METALS				
LEAD ^c	mg/L Pb	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/TURBID	
SEDIMENT			YELLOW	

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

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

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

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

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

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

AUGUST 9, 2022



ANALYSIS REPORT

CUSTOMER NAME : BANGCHAK CORPORATION PUBLIC COMPANY LIMITED
ADDRESS : 210 SUKHUMVIT 64 ROAD PHRA KHANONG TAI PHRA KHANONG BANGKOK 10260
CONTACT INFORMATION : TEL : 0 2335 4303 e-mail : Supawan@bangchak.co.th
SAMPLING SOURCE : ปากคลองบางอ้อ
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : AUGUST 1, 2022
SAMPLING TIME : 12:10 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR PHATSAWUT THOSAKOON
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : AUGUST 1, 2022
ANALYTICAL DATE : AUGUST 1-8, 2022
REPORT NO. : 2022-U061355
WORK NO. : 2022-000289
ANALYSIS NO. : T22AO969-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ปากคลองบางอ้อ T22AO969-0002	
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	29	-
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O C)	3.7	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	1.7	1.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	60.4	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	230	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
METALS				
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
SAMPLE CONDITION				
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID YELLOW	

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

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

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

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

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

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

AUGUST 9, 2022



ANALYSIS REPORT

CUSTOMER NAME : BANGCHAK CORPORATION PUBLIC COMPANY LIMITED
ADDRESS : 210 SUKHUMVIT 64 ROAD PHRA KHANONG TAI PHRA KHANONG BANGKOK 10260
CONTACT INFORMATION : TEL : 0 2335 4303 e-mail : Supawan@bangchak.co.th
SAMPLING SOURCE : ท้ายน้ำโครงการ
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : AUGUST 1, 2022
SAMPLING TIME : 12:20 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR PHATSAWUT THOSAKOON
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : AUGUST 1, 2022
ANALYTICAL DATE : AUGUST 1-8, 2022
REPORT NO. : 2022-U061356
WORK NO. : 2022-000289
ANALYSIS NO. : T22AO969-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ท้ายน้ำโครงการ T22AO969-0003	
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	29	-
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O C)	3.9	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	1.7	1.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	76.8	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	209	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
METALS				
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/TURBID	
SEDIMENT			YELLOW	

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

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

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

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

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

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

AUGUST 9, 2022



ANALYSIS REPORT

CUSTOMER NAME : BANGCHAK CORPORATION PUBLIC COMPANY LIMITED
ADDRESS : 210 SUKHUMVIT 64 ROAD PHRA KHANONG TAI PHRA KHANONG BANGKOK 10260
CONTACT INFORMATION : TEL : 0 2335 4303 e-mail : Supawan@bangchak.co.th
SAMPLING SOURCE : น้ำโรจกลั่นบางจากระหว่างท่าเทียบเรือ หมายเลข 18C และ 18D
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : AUGUST 1, 2022
SAMPLING TIME : 11:50 HOUR
SAMPLING METHOD ^c : GRAB
SAMPLING BY ^c : MR PHATSAWUT THOSAKOON
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : AUGUST 1, 2022
ANALYTICAL DATE : AUGUST 1-8, 2022
REPORT NO. : 2022-U061357
WORK NO. : 2022-000289
ANALYSIS NO. : T22A0969-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			หน้าโรงกลั่นบางจากระหว่างท่าเทียบเรือ หมายเลข 18C และ 18D T22A0969-0004	
TEMPERATURE ^c	°C	THERMOMETER AT SITE (SM: 2550 B)	29	-
DISSOLVED OXYGEN ^c	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O C)	4.0	0.5
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	1.8	1.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	67.6	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	206	25
FAT, OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
METALS				
LEAD ^c	mg/L Pb	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/TURBID	
SEDIMENT			YELLOW	

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

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

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

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

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

ND : NON-DETECTABLE.

Piyapat S.

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

AUGUST 9, 2022



ANALYSIS REPORT

CUSTOMER NAME : BANGCHAK CORPORATION PUBLIC COMPANY LIMITED
ADDRESS : 210 SUKHUMVIT 64 ROAD PHRA KHANONG TAI PHRA KHANONG BANGKOK 10260
CONTACT INFORMATION : TEL : 06 4514 5198 e-mail : palin@bangchak.co.th
SAMPLING SOURCE : ปากคลองบางจาก
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : DECEMBER 22, 2022
SAMPLING TIME : 12:00 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR PHATSAWUT THOSAKOON
ANALYZED BY : MISS AMONRAT PUTTALAE

RECEIVED DATE : DECEMBER 22, 2022
ANALYTICAL DATE : DECEMBER 22-30, 2022
REPORT NO. : 2023-U000016
WORK NO. : 2022-000289
ANALYSIS NO. : T22AZ591-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ปากคลองบางจาก T22AZ591-0001	
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	29	-
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O C)	5.1	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	1.3	1.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	10.5	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	10,371	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
METALS				
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/TURBID	
SEDIMENT			BROWN	

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

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

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

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

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

ND : NON-DETECTABLE.

Benjawan V.

(MISS BENJAWAN VIRIYOTHAJ)
LABORATORY SUPERVISOR

JANUARY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : BANGCHAK CORPORATION PUBLIC COMPANY LIMITED
ADDRESS : 210 SUKHUMVIT 64 ROAD PHRA KHANONG TAI PHRA KHANONG BANGKOK 10260
CONTACT INFORMATION : TEL : 06 4514 5198 e-mail : palin@bangchak.co.th
SAMPLING SOURCE : ปากคลองบางอ้อ
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : DECEMBER 22, 2022
SAMPLING TIME : 12:30 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR PHATSAWUT THOSAKOON
ANALYZED BY : MISS AMONRAT PUTTALAE

RECEIVED DATE : DECEMBER 22, 2022
ANALYTICAL DATE : DECEMBER 22-30, 2022
REPORT NO. : 2023-U000017
WORK NO. : 2022-000289
ANALYSIS NO. : T22AZ591-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ปากคลองบางอ้อ T22AZ591-0002	
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	28	-
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O C)	5.1	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	3.9	1.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	11.6	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	10,023	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
METALS				
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			YELLOW/TURBID	
SEDIMENT			BROWN	

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

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

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

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

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

ND : NON-DETECTABLE.

Benjawan V.

(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

JANUARY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : BANGCHAK CORPORATION PUBLIC COMPANY LIMITED
ADDRESS : 210 SUKHUMVIT 64 ROAD PHRA KHANONG TAI PHRA KHANONG BANGKOK 10260
CONTACT INFORMATION : TEL : 06 4514 5198 e-mail : palin@bangchak.co.th
SAMPLING SOURCE : ท้ายน้ำโครงการ
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : DECEMBER 22, 2022
SAMPLING TIME : 12:40 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR PHATSAWUT THOSAKOON
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : DECEMBER 22, 2022
ANALYTICAL DATE : DECEMBER 22-28, 2022
REPORT NO. : 2023-U000019
WORK NO. : 2022-000289
ANALYSIS NO. : T22AZ591-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			ท้ายน้ำโครงการ T22AZ591-0003	
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	28	-
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O C)	4.8	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	2.3	1.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	10.5	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	10,307	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
METALS				
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	

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

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

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

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

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

ND : NON-DETECTABLE.

Benjawan V.

(MISS BENJAWAN VIRIYOTHAIR)
LABORATORY SUPERVISOR

JANUARY 3, 2023



ANALYSIS REPORT

CUSTOMER NAME : BANGCHAK CORPORATION PUBLIC COMPANY LIMITED
ADDRESS : 210 SUKHUMVIT 64 ROAD PHRA KHANONG TAI PHRA KHANONG BANGKOK 10260
CONTACT INFORMATION : TEL : 06 4514 5198 e-mail : palin@bangchak.co.th
SAMPLING SOURCE : หน้าโรงกลั่นบางจากระหว่างท่าเทียบเรือ หมายเลข 18C และ 18D
SAMPLE TYPE : SURFACE WATER
SAMPLING DATE : DECEMBER 22, 2022
SAMPLING TIME : 12:10 HOUR
SAMPLING METHOD ° : GRAB
SAMPLING BY ° : MR PHATSAWUT THOSAKOON
ANALYZED BY : MISS AMONRAT PUTTALEE

RECEIVED DATE : DECEMBER 22, 2022
ANALYTICAL DATE : DECEMBER 22-28, 2022
REPORT NO. : 2023-U000020
WORK NO. : 2022-000289
ANALYSIS NO. : T22AZ591-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			หน้าโรงกลั่นบางจาก ระหว่างท่าเทียบเรือ หมายเลข 18C และ 18D T22AZ591-0004	
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	28	-
DISSOLVED OXYGEN °	mg/L	AZIDE MODIFICATION METHOD AT SITE (SM: 4500-O C)	5.1	0.5
BIOCHEMICAL OXYGEN DEMAND °	mg/L	AZIDE MODIFICATION METHOD (SM: 4500-O C AND 5210 B)	2.1	1.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	10.9	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	9,911	25
FAT, OIL AND GREASE °	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: 5520 B)	ND	3
METALS				
LEAD °	mg/L Pb	IN-HOUSE METHOD: UAE.TP.SW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: 3030 E AND 3111 B	ND	0.003
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BROWN	

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

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

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

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

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

ND : NON-DETECTABLE.

Benjawan V.

(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

JANUARY 3, 2023

