

ANALYSIS REPORT

CUSTOMER NAME : NONGKHAINAYU CO., LTD.
ADDRESS : 223/61 14TH FLOOR, COUNTRY COMPLEX TOWER A, SANPHAWUT RD, BANG NA BANG NA BANGKOK 10260
CONTACT INFORMATION : TEL : 086-8216191 e-mail : jetchan.c@supercorp.co.th
SAMPLING SOURCE : บริษัท นองคายน้ำอยู่ จำกัด จังหวัดหนองคาย
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : MARCH 28, 2024
SAMPLING TIME : 10:10 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS AKSARIN BUNKONG

RECEIVED DATE : MARCH 28, 2024
ANALYTICAL DATE : MARCH 28 - APRIL 17, 2024
ISSUE DATE : APRIL 25, 2024
REPORT NO. : 2024-U034080
WORK NO. : 2023-008979
ANALYSIS NO. : T24AG652-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			น้ำเสียก่อนเข้าระบบ บำบัดน้ำเสีย T24AG652-0001	
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.3 (36°C)	-
TEMPERATURE ^c	°C	LABORATORY AND FIELD METHODS (SM: PART 2550 B)	36	-
FLOW RATE ^c	m ³ /s	CURRENT METER AND CALCULATION	0	-
DISSOLVED OXYGEN ^c	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: PART 4500-O G)	ND	0.5
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	3,348	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: PART 5220 D)	10,839	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: PART 2540 D)	721	5.0
TOTAL DISSOLVED SOLIDS ^c	mg/L	DRIED AT 180 °C (SM: PART 2540 C)	28,960	25
OIL AND GREASE ^a	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	21	3
METALS				
CADMIUM ^c	mg/L Cd	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: PART 3030 E AND PART 3111 B)	< LOQ	0.002
LEAD ^c	mg/L Pb	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: PART 3030 E AND PART 3111 B)	ND	0.015
MANGANESE ^c	mg/L Mn	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: PART 3030 E AND PART 3111 B)	0.370	0.004
MERCURY ^c	mg/L Hg	DIGESTION, COLD-VAPOUR ATOMIC ABSORPTION SPECTROMETRIC METHOD (SM: PART 3112 B)	0.0006	0.0005
ZINC ^c	mg/L Zn	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: PART 3030 E AND PART 3111 B)	0.496	0.003



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			น้ำเสียก่อนเข้าระบบ บำบัดน้ำเสีย T24AG652-0001	
MICROBIOLOGY				
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221B)	< 1.8	1.8
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	< 1.8	1.8
SAMPLE CONDITION				
WATER'S COLOUR/TURBID			BROWN/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

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

ND : NON-DETECTABLE.

< LOQ : < LIMIT OF QUANTITATION (CADMIUM ≥ 0.002 AND < 0.020 mg/L).

Bhuchonk p.

(MR BHUCHONK PANICHLERTUMPI)
LABORATORY SUPERVISOR

APRIL 25, 2024

ANALYSIS REPORT

CUSTOMER NAME : NONGKHAINAYU CO., LTD.
ADDRESS : 223/61 14TH FLOOR, COUNTRY COMPLEX TOWER A, SANPAWUT RD, BANG NA BANG NA BANGKOK 10260
CONTACT INFORMATION : TEL : 086-8216191 e-mail : jetchan.c@supercorp.co.th
SAMPLING SOURCE : บริษัท หนองคายน้ำอยู่ จำกัด จังหวัดหนองคาย
SAMPLE TYPE : EFFLUENT
SAMPLING DATE : MARCH 28, 2024
SAMPLING TIME : 09:50 HOUR
SAMPLING METHOD : GRAB, GRAB AND STERILE TECHNIQUE
SAMPLING BY : MR PRACHCHAPOL SOPHA
ANALYZED BY : MISS AKSARIN BUNKONG
RECEIVED DATE : MARCH 28, 2024
ANALYTICAL DATE : MARCH 28 - APRIL 17, 2024
ISSUE DATE : APRIL 25, 2024
REPORT NO. : 2024-U034081
WORK NO. : 2023-008979
ANALYSIS NO. : T24AG652-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อพักน้ำหมุนเวียน กลับมาใช้ใหม่ ความจุ 300 ลูกบาศก์เมตร T24AG652-0002		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.7 (30°C)	5.5-9.0	-
TEMPERATURE ^c	°C	LABORATORY AND FIELD METHODS (SM: PART 2550 B)	30	≤ 40	-
FLOW RATE ^c	m ³ /s	CURRENT METER AND CALCULATION	0	-	-
DISSOLVED OXYGEN ^c	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: PART 4500-O G)	5.1	-	0.5
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	4.6	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: PART 5220 D)	33.5	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: PART 2540 D)	ND	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: PART 2540 C)	2,497	≤ 3,000	25
OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 5	3
METALS					
CADMIUM ^c	mg/L Cd	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: PART 3030 E AND PART 3111 B)	ND	≤ 0.03	0.002
LEAD ^c	mg/L Pb	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: PART 3030 E AND PART 3111 B)	ND	≤ 0.2	0.015
MANGANESE ^c	mg/L Mn	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: PART 3030 E AND PART 3111 B)	< LOQ	≤ 5.0	0.004
MERCURY ^c	mg/L Hg	DIGESTION, COLD-VAPOUR ATOMIC ABSORPTION SPECTROMETRIC METHOD (SM: PART 3112 B)	ND	≤ 0.005	0.0005
ZINC ^c	mg/L Zn	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: PART 3030 E AND PART 3111 B)	0.125	≤ 5.0	0.003



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อพักน้ำหมุนเวียน กลับมาใช้ใหม่ ความจุ 300 ลูกบาศก์เมตร T24AG652-0002		
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B)	< 1.8	-	1.8
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	< 1.8	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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

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

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

< LOQ : < LIMIT OF QUANTITATION (MANGANESE ≥ 0.004 AND < 0.050 mg/L).



(MR BHUCHONK PANICHLERTUMPI)
LABORATORY SUPERVISOR

APRIL 25, 2024

ANALYSIS REPORT

CUSTOMER NAME	: NONGKHAINAYU CO., LTD.	RECEIVED DATE	: MARCH 28, 2024
ADDRESS	: 223/61 14TH FLOOR, COUNTRY COMPLEX TOWER A, SANPHAWUT RD, BANG NA BANG NA BANGKOK 10260	ANALYTICAL DATE	: MARCH 28 - APRIL 17, 2024
CONTACT INFORMATION	: TEL : 086-8216191 e-mail : jetchan.c@supercorp.co.th	ISSUE DATE	: APRIL 25, 2024
SAMPLING SOURCE	: บริษัท นนงคายน่ายู จำกัด จังหวัดนนทบุรี	REPORT NO.	: 2024-U034083
SAMPLE TYPE	: EFFLUENT	WORK NO.	: 2023-008979
SAMPLING DATE	: MARCH 28, 2024	ANALYSIS NO.	: T24AG652-0003
SAMPLING TIME	: 09:15 HOUR		
SAMPLING METHOD	: GRAB, GRAB AND STERILE TECHNIQUE		
SAMPLING BY	: MR PRACHCHAPOL SOPHA		
ANALYZED BY	: MISS AKSARIN BUNKONG		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อพักน้ำหมุนเวียน กลับมาใช้ใหม่ ความจุ 2,500 ลูกบาศก์เมตร T24AG652-0003		
pH ^a	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H ⁺ B)	8.8 (30°C)	5.5-9.0	-
TEMPERATURE ^c	°C	LABORATORY AND FIELD METHODS (SM: PART 2550 B)	30	≤ 40	-
FLOW RATE ^c	m³/s	CURRENT METER AND CALCULATION	0	-	-
DISSOLVED OXYGEN ^c	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: PART 4500-O G)	5.3	-	0.5
BIOCHEMICAL OXYGEN DEMAND ^a	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	7.4	≤ 20	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: PART 5220 D)	136	≤ 120	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	DRIED AT 103-105 °C (SM: PART 2540 D)	24.8	≤ 50	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	DRIED AT 180 °C (SM: PART 2540 C)	2,770	≤ 3,000	25
OIL AND GREASE ^c	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	≤ 5	3
METALS					
CADMIUM ^c	mg/L Cd	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: PART 3030 E AND PART 3111 B)	ND	≤ 0.03	0.002
LEAD ^c	mg/L Pb	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: PART 3030 E AND PART 3111 B)	ND	≤ 0.2	0.015
MANGANESE ^c	mg/L Mn	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: PART 3030 E AND PART 3111 B)	< LOQ	≤ 5.0	0.004
MERCURY ^c	mg/L Hg	DIGESTION, COLD-VAPOUR ATOMIC ABSORPTION SPECTROMETRIC METHOD (SM: PART 3112 B)	ND	≤ 0.005	0.0005
ZINC ^c	mg/L Zn	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: PART 3030 E AND PART 3111 B)	< LOQ	≤ 5.0	0.003



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			บ่อพักน้ำหมุนเวียน กลับมาใช้ใหม่ ความจุ 2,500 ลูกบาศก์เมตร T24AG652-0003		
MICROBIOLOGY					
COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221B)	490	-	1.8
FAECAL COLIFORM BACTERIA ^b	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	31	-	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			YELLOW/TURBID		
SEDIMENT			GREEN		

^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

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

REGULATORY STANDARD : INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY, B.E. 2560,
PUBLISHED IN THE ROYAL GOVERNMENT GAZETTE, VOL 134, PART 153 D, DATED JUNE 7, 2017.

ND : NON-DETECTABLE.

< LOQ : < LIMIT OF QUANTITATION (MANGANESE ≥ 0.004 AND < 0.050 mg/L, ZINC ≥ 0.003 AND < 0.050 mg/L).

Bhuchonk

(MR BHUCHONK PANICHLERTUMPI)
LABORATORY SUPERVISOR

APRIL 25, 2024

ANALYSIS REPORT

CUSTOMER NAME : NONGKHAINAYU CO., LTD.
ADDRESS : 223/61 14TH FLOOR, COUNTRY COMPLEX TOWER A, SANPHAWUT RD, BANG NA BANG NA BANGKOK 10260
CONTACT INFORMATION : TEL : 086-8216191 e-mail : jetchan.c@supercorp.co.th
SAMPLING SOURCE : -
SAMPLE TYPE : BLANK (WASTEWATER) **RECEIVED DATE** : MARCH 28, 2024
SAMPLING DATE : - **ANALYTICAL DATE** : MARCH 28 - APRIL 17, 2024
SAMPLING TIME : - **ISSUE DATE** : APRIL 25, 2024
SAMPLING METHOD : - **REPORT NO.** : 2024-U034086
SAMPLING BY : - **WORK NO.** : 2023-008979
ANALYZED BY : MISS AKSARIN BUNKONG **ANALYSIS NO.** : 2024-FB0298, 2024-TB0289

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		DETECTION LIMIT
			1 2024-FB0298	2 2024-TB0289	
BIOCHEMICAL OXYGEN DEMAND	mg/L	5-DAY BOD TEST, MEMBRANE ELECTRODE METHOD (SM: PART 5210 B AND PART 4500-O G)	< 2.0	< 2.0	2.0
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: PART 5220 D)	ND	ND	25.0
TOTAL SUSPENDED SOLIDS	mg/L	DRIED AT 103-105 °C (SM: PART 2540 D)	ND	ND	5.0
TOTAL DISSOLVED SOLIDS	mg/L	DRIED AT 180 °C (SM: PART 2540 C)	ND	ND	25
OIL AND GREASE	mg/L	LIQUID-LIQUID, PARTITION-GRAVIMETRIC METHOD (SM: PART 5520 B)	ND	ND	3
METALS					
CADMIUM	mg/L Cd	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: PART 3030 E AND PART 3111 B)	ND	ND	0.002
LEAD	mg/L Pb	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: PART 3030 E AND PART 3111 B)	ND	ND	0.015
MANGANESE	mg/L Mn	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: PART 3030 E AND PART 3111 B)	ND	ND	0.004
MERCURY	mg/L Hg	DIGESTION, COLD-VAPOUR ATOMIC ABSORPTION SPECTROMETRIC METHOD (SM: PART 3112 B)	ND	ND	0.0005
ZINC	mg/L Zn	DIGESTION, DIRECT AIR-ACETYLENE FLAME METHOD (SM: PART 3030 E AND PART 3111 B)	ND	ND	0.003



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		DETECTION LIMIT
			1 2024-FB0298	2 2024-TB0289	
MICROBIOLOGY					
COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: PART 9221 B)	< 1.8	< 1.8	1.8
FAECAL COLIFORM BACTERIA	MPN/100 mL	MULTIPLE-TUBE FERMENTATION TECHNIQUE (SM: 9221 E)	< 1.8	< 1.8	1.8
SAMPLE CONDITION					
WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR -	COLOURLESS/CLEAR -	

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

RESULT 1 : FIELD BLANK

RESULT 2 : TRIP BLANK

ND : NON-DETECTABLE.

Bhuchonk p.

(MR BHUCHONK PANICHLERTUMPI)
LABORATORY SUPERVISOR

APRIL 25, 2024