

ภาคผนวก ข

สำเนาใบรายงานผลการติดตามตรวจสอบคุณภาพสิ่งแวดล้อม

ภาคผนวก ช-1

ผลการติดตามตรวจสอบคุณภาพอากาศในบรรยากาศโดยทั่วไป

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL QUALITY MONITORING DURING OPERATION PERIOD OF BLP POWER PLANT PROJECT
CUSTOMER NAME : BLP POWER LIMITED
ADDRESS : NO. 9, I-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUEANG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@blcp.co.th
SAMPLING SOURCE : NORTHEAST OF COAL STOCK YARD
SAMPLE TYPE : AMBIENT
SAMPLING DATE : *, **, ***
SAMPLING TIME : *, **, ***
SAMPLING BY : MR SAKSITHON NUMNIM
ANALYZED BY : MISS JETJARIN TUMSA-AT

RECEIVED DATE : JUNE 10, 2024
ANALYTICAL DATE : JUNE 10-14, 2024
ISSUE DATE : JUNE 19, 2024
REPORT NO. : 2024-U054139
WORK NO. : 2021-008697
ANALYSIS NO. : T24AM639-0001 - T24AM639-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		
			NORTHEAST OF COAL STOCK YARD		
			* T24AM639-0001	** T24AM639-0002	*** T24AM639-0003
TOTAL SUSPENDED PARTICULATE	mg/m ³	GRAVIMETRIC (HIGH VOLUME METHOD)	0.029	0.036	0.044
PARTICULATE MATTER (≤ 10 µm)	mg/m ³	GRAVIMETRIC (HIGH VOLUME METHOD)	0.015	0.020	0.019
FINE PARTICULATE MATTER as PM2.5 (≤ 2.5 µm)	µg/m ³	US EPA, CODE OF FEDERAL REGULATION, 40 CFR CHAPTER I-PART 50, APPENDIX L, REFERENCE METHOD FOR THE DETERMINATION OF FINE PARTICULATE MATTER AS PM2.5 IN THE ATMOSPHERE, 2021	6.90	9.00	9.20
SAMPLE CONDITION			COMPLETE	COMPLETE	COMPLETE

REMARK
TSP, PM10 : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.
PM2.5 : REPORTED AS PER ACTUAL FIELD CONDITIONS DURING SAMPLING.
TSP : US EPA, CODE OF FEDERAL REGULATIONS, 40 CFR CHAPTER I-PART 50 APPENDIX B, REFERENCE METHOD FOR THE DETERMINATION OF SUSPENDED PARTICULATE MATTER IN THE ATMOSPHERE (HIGH-VOLUME METHOD) REVISED AS OF JULY 1, 2021.
PM10 : US EPA, CODE OF FEDERAL REGULATIONS, 40 CFR CHAPTER I-PART 50 APPENDIX J, REFERENCE METHOD FOR THE DETERMINATION OF PARTICULATE MATTER AS PM10 IN THE ATMOSPHERE (HIGH-VOLUME METHOD) REVISED AS OF JULY 1, 2021.
* : SAMPLING FROM 11:30 HOUR ON JUNE 5, 2024 TO 11:30 HOUR ON JUNE 6, 2024.
** : SAMPLING FROM 11:30 HOUR ON JUNE 6, 2024 TO 11:30 HOUR ON JUNE 7, 2024.
*** : SAMPLING FROM 11:30 HOUR ON JUNE 7, 2024 TO 11:30 HOUR ON JUNE 8, 2024.



(MISS BUDSAKORN LERDPANUMAS)
LABORATORY SUPERVISOR



ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL QUALITY MONITORING DURING OPERATION PERIOD OF BLP POWER PLANT PROJECT
CUSTOMER NAME : BLP POWER LIMITED
ADDRESS : NO. 9, I-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUEANG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@blcp.co.th
SAMPLING SOURCE : SOUTHWEST OF COAL STOCK YARD
SAMPLE TYPE : AMBIENT
SAMPLING DATE : *, **, ***
SAMPLING TIME : *, **, ***
SAMPLING BY : MR SAKSITHON NUMNIM
ANALYZED BY : MISS JETJARIN TUMSA-AT

RECEIVED DATE : JUNE 10, 2024
ANALYTICAL DATE : JUNE 10-14, 2024
ISSUE DATE : JUNE 19, 2024
REPORT NO. : 2024-U054140
WORK NO. : 2021-008697
ANALYSIS NO. : T24AM639-0004 - T24AM639-0006

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		
			SOUTHWEST OF COAL STOCK YARD		
			* T24AM639-0004	** T24AM639-0005	*** T24AM639-0006
TOTAL SUSPENDED PARTICULATE	mg/m ³	GRAVIMETRIC (HIGH VOLUME METHOD)	0.031	0.061	0.036
PARTICULATE MATTER (≤ 10 µm)	mg/m ³	GRAVIMETRIC (HIGH VOLUME METHOD)	0.020	0.031	0.025
FINE PARTICULATE MATTER as PM2.5 (≤ 2.5 µm)	µg/m ³	US EPA, CODE OF FEDERAL REGULATION, 40 CFR CHAPTER I-PART 50, APPENDIX L, REFERENCE METHOD FOR THE DETERMINATION OF FINE PARTICULATE MATTER AS PM2.5 IN THE ATMOSPHERE, 2021	7.10	12.0	8.80
SAMPLE CONDITION			COMPLETE	COMPLETE	COMPLETE

REMARK
TSP, PM10 : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.
PM2.5 : REPORTED AS PER ACTUAL FIELD CONDITIONS DURING SAMPLING.
TSP : US EPA, CODE OF FEDERAL REGULATIONS, 40 CFR CHAPTER I-PART 50 APPENDIX B, REFERENCE METHOD FOR THE DETERMINATION OF SUSPENDED PARTICULATE MATTER IN THE ATMOSPHERE (HIGH-VOLUME METHOD) REVISED AS OF JULY 1, 2021.
PM10 : US EPA, CODE OF FEDERAL REGULATIONS, 40 CFR CHAPTER I-PART 50 APPENDIX J, REFERENCE METHOD FOR THE DETERMINATION OF PARTICULATE MATTER AS PM10 IN THE ATMOSPHERE (HIGH-VOLUME METHOD) REVISED AS OF JULY 1, 2021.
* : SAMPLING FROM 12:00 HOUR ON JUNE 5, 2024 TO 12:00 HOUR ON JUNE 6, 2024.
** : SAMPLING FROM 12:00 HOUR ON JUNE 6, 2024 TO 12:00 HOUR ON JUNE 7, 2024.
*** : SAMPLING FROM 12:00 HOUR ON JUNE 7, 2024 TO 12:00 HOUR ON JUNE 8, 2024.



(MISS BUDSAKORN LERDPANUMAS)
LABORATORY SUPERVISOR



ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL QUALITY MONITORING DURING OPERATION PERIOD OF COAL UNLOADING FACILITIES PROJECT
CUSTOMER NAME : BLCP POWER LIMITED
ADDRESS : NO. 9, I-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUEANG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@blcp.co.th
SAMPLING SOURCE : STATION A : BAN TA KUAN
SAMPLE TYPE : AMBIENT
SAMPLING DATE : *, **, ***
SAMPLING TIME : *, **, ***
SAMPLING BY : MR SAKSITHON NUMNIM
ANALYZED BY : MISS JETJARIN TUMSA-AT
RECEIVED DATE : JUNE 10, 2024
ANALYTICAL DATE : JUNE 10-14, 2024
ISSUE DATE : JUNE 19, 2024
REPORT NO. : 2024-U054175
WORK NO. : 2021-008698
ANALYSIS NO. : T24AM637-0007 - T24AM637-0009

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT		
			STATION A : BAN TA KUAN		
			* T24AM637-0007	** T24AM637-0008	*** T24AM637-0009
TOTAL SUSPENDED PARTICULATE	mg/m ³	GRAVIMETRIC (HIGH VOLUME METHOD)	0.027	0.028	0.029
PARTICULATE MATTER (≤ 10 µm)	mg/m ³	GRAVIMETRIC (HIGH VOLUME METHOD)	0.014	0.017	0.015
FINE PARTICULATE MATTER as PM2.5 (≤ 2.5 µm)	µg/m ³	US EPA, CODE OF FEDERAL REGULATION, 40 CFR CHAPTER I-PART 50, APPENDIX L, REFERENCE METHOD FOR THE DETERMINATION OF FINE PARTICULATE MATTER AS PM2.5 IN THE ATMOSPHERE, 2021	7.20	6.80	8.40
SAMPLE CONDITION			COMPLETE	COMPLETE	COMPLETE

REMARK
TSP, PM10 : REFERENCE CONDITION IS 25 DEGREE CELSIUS AT 1 ATMOSPHERE.
PM2.5 : REPORTED AS PER ACTUAL FIELD CONDITIONS DURING SAMPLING.
TSP : US EPA, CODE OF FEDERAL REGULATIONS, 40 CFR CHAPTER I-PART 50 APPENDIX B, REFERENCE METHOD FOR THE DETERMINATION OF SUSPENDED PARTICULATE MATTER IN THE ATMOSPHERE (HIGH-VOLUME METHOD) REVISED AS OF JULY 1, 2021.
PM10 : US EPA, CODE OF FEDERAL REGULATIONS, 40 CFR CHAPTER I-PART 50 APPENDIX J, REFERENCE METHOD FOR THE DETERMINATION OF PARTICULATE MATTER AS PM10 IN THE ATMOSPHERE (HIGH-VOLUME METHOD) REVISED AS OF JULY 1, 2021.
* : SAMPLING FROM 09:00 HOUR ON JUNE 5, 2024 TO 09:00 HOUR ON JUNE 6, 2024.
** : SAMPLING FROM 09:00 HOUR ON JUNE 6, 2024 TO 09:00 HOUR ON JUNE 7, 2024.
*** : SAMPLING FROM 09:00 HOUR ON JUNE 7, 2024 TO 09:00 HOUR ON JUNE 8, 2024.

(MISS BUDSAKORN LERDPANUMAS)
LABORATORY SUPERVISOR



ภาคผนวก ช-2

ผลการติดตามตรวจสอบระบบรวบรวมน้ำปนเปื้อนและประสิทธิภาพของบ่อกักตะกอน

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL MEASURING AND MONITORING PROGRAMME(EMMP) RELATE WITH ISO 14001
CUSTOMER NAME : BLP POWER LIMITED
ADDRESS : NO. 9, 1-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUEANG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@blcp.co.th
SAMPLING SOURCE : COAL YARD WASTEWATER TREATMENT PLANT
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : FEBRUARY 7, 2024
SAMPLING TIME : 14:20 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS KALLAYA SOMPHONG

RECEIVED DATE : FEBRUARY 8, 2024
ANALYTICAL DATE : FEBRUARY 8-17, 2024
ISSUE DATE : FEBRUARY 27, 2024
REPORT NO. : 2024-U016263
WORK NO. : 2021-008701
ANALYSIS NO. : T24AC492-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT INTO COAL YARD WASTEWATER TREATMENT PLANT T24AC492-0004	
pH ^a	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500 -H ⁺ B AND 1060 B	6.4 (34.6°C)	-
COLOUR (ORIGINAL pH) ^b	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
COLOUR (pH 7.0) ^b	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
ODOUR ^c	-	OBSERVATION METHOD	NONE	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	ND	2.0
CHEMICAL OXYGEN DEMAND ^c	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: PART 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS ^c	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	3,720	25
NITRATE ^c	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: PART 4500-NO ₃ ⁻ E)	1.82	0.09
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM: PART 4500-S ²⁻ F)	< 0.50	0.50
FAT, OIL AND GREASE ^c	mg/L	SOXHLET EXTRACTION METHOD (SM: PART 5520 D)	ND	3
METALS				
ARSENIC ^c	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	ND	0.0003
BARIUM ^c	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: PART 3030 F AND PART 3120 B)	0.082	0.005
CADMIUM ^c	mg/L Cd	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.002
HEXAVALENT CHROMIUM ^c	mg/L Cr ⁶⁺	COLOURIMETRIC METHOD (SM: PART 3500-Cr B)	ND	0.006
TRIVALENT CHROMIUM ^c	mg/L Cr ³⁺	NITRIC ACID DIGESTION, DIRECT AIR ACETYLENE FLAME, COLOURIMETRIC (SM: PART 3030 E, PART 3111 B AND PART 3500-Cr B) AND CALCULATION METHOD	ND	0.007



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT INTO COAL YARD WASTEWATER TREATMENT PLANT T24AC492-0004	
COPPER ^c	mg/L Cu	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.005
IRON ^c	mg/L Fe	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.005
LEAD ^c	mg/L Pb	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.015
MANGANESE ^c	mg/L Mn	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	4.56	0.004
MERCURY ^c	mg/L Hg	COLD VAPOUR AAS METHOD (SM: PART 3112 B)	ND	0.0005
NICKEL ^c	mg/L Ni	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.005
SELENIUM ^c	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	0.0048	0.0005
ZINC ^c	mg/L Zn	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	0.467	0.003
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

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 : < LIMIT OF QUANTITATION (COPPER ≥ 0.005 AND < 0.050 mg/L, IRON ≥ 0.005 AND < 0.100 mg/L, LEAD ≥ 0.015 AND < 0.200 mg/L, NICKEL ≥ 0.005 AND < 0.100 mg/L).

(MISS BENJAWAN VIRIYOTHA)
LABORATORY SUPERVISOR

FEBRUARY 28, 2024

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL MEASURING AND MONITORING PROGRAMME(EMMP) RELATE WITH ISO 14001
CUSTOMER NAME : BLCP POWER LIMITED
ADDRESS : NO. 9, I-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUEANG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@blcp.co.th
SAMPLING SOURCE : COAL YARD WASTEWATER TREATMENT PLANT
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : FEBRUARY 7, 2024
SAMPLING TIME : 14:12 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS KALLAYA SOMPHONG

RECEIVED DATE : FEBRUARY 8, 2024
ANALYTICAL DATE : FEBRUARY 8-17, 2024
ISSUE DATE : FEBRUARY 27, 2024
REPORT NO. : 2024-U016264
WORK NO. : 2021-008701
ANALYSIS NO. : T24AC492-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			EFFLUENT FROM COAL YARD WASTEWATER TREATMENT PLANT T24AC492-0005	
pH ^a	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500 -H ⁺ B AND 1060 B	7.5 (32.6°C)	-
COLOUR (ORIGINAL pH) ^b	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
COLOUR (pH 7.0) ^b	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
ODOUR ^c	-	OBSERVATION METHOD	NONE	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	ND	2.0
CHEMICAL OXYGEN DEMAND ^c	mg/L	CLOSED REFLUX, TITRIMETRIC METHOD (SM: PART 5220 C)	ND	25.0
TOTAL SUSPENDED SOLIDS ^c	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	1,140	25
NITRATE ^c	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: PART 4500-NO ₃ ⁻ E)	8.73	0.09
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM: PART 4500-S ₂ ²⁻ F)	< 0.50	0.50
FAT, OIL AND GREASE ^c	mg/L	SOXHLET EXTRACTION METHOD (SM: PART 5520 D)	ND	3
METALS				
ARSENIC ^c	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	ND	0.0003
BARIUM ^c	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: PART 3030 F AND PART 3120 B)	0.080	0.005
CADMIUM ^c	mg/L Cd	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.002
HEXAVALENT CHROMIUM ^c	mg/L Cr ⁶⁺	COLOURIMETRIC METHOD (SM: PART 3500-Cr B)	ND	0.006
TRIVALENT CHROMIUM ^c	mg/L Cr ³⁺	NITRIC ACID DIGESTION, DIRECT AIR ACETYLENE FLAME, COLOURIMETRIC (SM: PART 3030 E, PART 3111 B AND PART 3500-Cr B) AND CALCULATION METHOD	ND	0.007



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			EFFLUENT FROM COAL YARD WASTEWATER TREATMENT PLANT T24AC492-0005	
COPPER ^c	mg/L Cu	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.005
IRON ^c	mg/L Fe	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.005
LEAD ^c	mg/L Pb	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.015
MANGANESE ^c	mg/L Mn	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	1.21	0.004
MERCURY ^c	mg/L Hg	COLD VAPOUR AAS METHOD (SM: PART 3112 B)	ND	0.0005
NICKEL ^c	mg/L Ni	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.005
SELENIUM ^c	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	0.0085	0.0005
ZINC ^c	mg/L Zn	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.003
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

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 : < LIMIT OF QUANTITATION (COPPER ≥ 0.005 AND < 0.050 mg/L, IRON ≥ 0.005 AND < 0.100 mg/L, ZINC ≥ 0.003 AND < 0.050 mg/L).

(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

FEBRUARY 28, 2024

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL MEASURING AND MONITORING PROGRAMME(EMMP) RELATE WITH ISO 14001
CUSTOMER NAME : BLCF POWER LIMITED
ADDRESS : NO. 9, I-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUEANG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@blcp.co.th
SAMPLING SOURCE : COAL YARD WASTEWATER TREATMENT PLANT
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : MARCH 6, 2024
SAMPLING TIME : 10:35 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS KALLAYA SOMPHONG

RECEIVED DATE : MARCH 7, 2024
ANALYTICAL DATE : MARCH 7-18, 2024
ISSUE DATE : MARCH 25, 2024
REPORT NO. : 2024-U024546
WORK NO. : 2021-008701
ANALYSIS NO. : T24AE665-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT INTO COAL YARD WASTEWATER TREATMENT PLANT T24AE665-0004	
pH ^a	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500 -H ⁺ B AND 1060 B	7.6 (35.1°C)	-
COLOUR (ORIGINAL pH) ^b	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
COLOUR (pH 7.0) ^b	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
ODOUR ^c	-	OBSERVATION METHOD	NONE	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	2.1	2.0
CHEMICAL OXYGEN DEMAND ^c	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: PART 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS ^c	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	2,220	25
NITRATE ^c	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: PART 4500-NO ₃ ⁻ E)	0.66	0.09
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM: PART 4500-S ²⁻ F)	< 0.50	0.50
FAT, OIL AND GREASE ^c	mg/L	SOXHLET EXTRACTION METHOD (SM: PART 5520 D)	ND	3
METALS				
ARSENIC ^c	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	ND	0.0003
BARIUM ^c	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: PART 3030 F AND PART 3120 B)	0.064	0.005
CADMIUM ^c	mg/L Cd	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.002
HEXAVALENT CHROMIUM ^c	mg/L Cr ⁶⁺	COLOURIMETRIC METHOD (SM: PART 3500-Cr B)	ND	0.006
TRIVALENT CHROMIUM ^c	mg/L Cr ³⁺	NITRIC ACID DIGESTION, DIRECT AIR ACETYLENE FLAME, COLOURIMETRIC (SM: PART 3030 E, PART 3111 B AND PART 3500-Cr B) AND CALCULATION METHOD	ND	0.007



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT INTO COAL YARD WASTEWATER TREATMENT PLANT T24AE665-0004	
COPPER ^c	mg/L Cu	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.005
IRON ^c	mg/L Fe	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.005
LEAD ^c	mg/L Pb	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.015
MANGANESE ^c	mg/L Mn	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	0.277	0.004
MERCURY ^c	mg/L Hg	COLD VAPOUR AAS METHOD (SM: PART 3112 B)	ND	0.0005
NICKEL ^c	mg/L Ni	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.005
SELENIUM ^c	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	0.0091	0.0005
ZINC ^c	mg/L Zn	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	0.088	0.003
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)

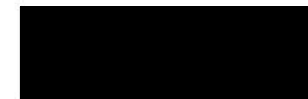
^c : VERIFIED BY OWN LABORATORY QUALITY SYSTEM, BUT STILL NOT ACCREDITED

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 : < LIMIT OF QUANTITATION (IRON ≥ 0.005 AND < 0.100 mg/L).



(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

MARCH 26, 2024

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL MEASURING AND MONITORING PROGRAMME(EMMP) RELATE WITH ISO 14001
CUSTOMER NAME : BLCF POWER LIMITED
ADDRESS : NO. 9, I-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUEANG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@blcp.co.th
SAMPLING SOURCE : COAL YARD WASTEWATER TREATMENT PLANT
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : MARCH 6, 2024
SAMPLING TIME : 10:30 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS KALLAYA SOMPHONG

RECEIVED DATE : MARCH 7, 2024
ANALYTICAL DATE : MARCH 7-18, 2024
ISSUE DATE : MARCH 25, 2024
REPORT NO. : 2024-U024547
WORK NO. : 2021-008701
ANALYSIS NO. : T24AE665-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			EFFLUENT FROM COAL YARD WASTEWATER TREATMENT PLANT T24AE665-0005	
pH ^a	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500 -H ⁺ B AND 1060 B	7.6 (34.7°C)	-
COLOUR (ORIGINAL pH) ^b	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
COLOUR (pH 7.0) ^b	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
ODOUR ^c	-	OBSERVATION METHOD	NONE	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	2.2	2.0
CHEMICAL OXYGEN DEMAND ^c	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: PART 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS ^c	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	333	25
NITRATE ^c	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: PART 4500-NO ₃ ⁻ E)	1.28	0.09
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM: PART 4500-S ₂ ²⁻ F)	< 0.50	0.50
FAT, OIL AND GREASE ^c	mg/L	SOXHLET EXTRACTION METHOD (SM: PART 5520 D)	ND	3
METALS				
ARSENIC ^c	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	0.0012	0.0003
BARIUM ^c	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: PART 3030 F AND PART 3120 B)	0.031	0.005
CADMIUM ^c	mg/L Cd	IN-HOUSE METHOD: UAE.TP.IW.01(NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.002
HEXAVALENT CHROMIUM ^c	mg/L Cr ⁶⁺	COLOURIMETRIC METHOD (SM: PART 3500-Cr B)	ND	0.006
TRIVALENT CHROMIUM ^c	mg/L Cr ³⁺	NITRIC ACID DIGESTION, DIRECT AIR ACETYLENE FLAME, COLOURIMETRIC (SM: PART 3030 E, PART 3111 B AND PART 3500-Cr B) AND CALCULATION METHOD	ND	0.007



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			EFFLUENT FROM COAL YARD WASTEWATER TREATMENT PLANT T24AE665-0005	
COPPER ^c	mg/L Cu	IN-HOUSE METHOD: UAE.TP.IW.01(NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.005
IRON ^c	mg/L Fe	IN-HOUSE METHOD: UAE.TP.IW.01(NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	0.210	0.005
LEAD ^c	mg/L Pb	IN-HOUSE METHOD: UAE.TP.IW.01(NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.015
MANGANESE ^c	mg/L Mn	IN-HOUSE METHOD: UAE.TP.IW.01(NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.004
MERCURY ^c	mg/L Hg	COLD VAPOUR AAS METHOD (SM: PART 3112 B)	ND	0.0005
NICKEL ^c	mg/L Ni	IN-HOUSE METHOD: UAE.TP.IW.01(NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.005
SELENIUM ^c	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	0.0034	0.0005
ZINC ^c	mg/L Zn	IN-HOUSE METHOD: UAE.TP.IW.01(NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.003
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

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

(MISS BENJAWAN VIRIYOTHAJ)
LABORATORY SUPERVISOR

MARCH 26, 2024

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL MEASURING AND MONITORING PROGRAMME(EMMP) RELATE WITH ISO 14001
CUSTOMER NAME : BLCP POWER LIMITED
ADDRESS : NO. 9, I-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUEANG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@blcp.co.th
SAMPLING SOURCE : COAL YARD WASTEWATER TREATMENT PLANT
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : APRIL 3, 2024
SAMPLING TIME : 11:05 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS KALLAYA SOMPHONG

RECEIVED DATE : APRIL 4, 2024
ANALYTICAL DATE : APRIL 4-25, 2024
ISSUE DATE : APRIL 29, 2024
REPORT NO. : 2024-U035299
WORK NO. : 2021-008701
ANALYSIS NO. : T24AH153-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT INTO COAL YARD WASTEWATER TREATMENT PLANT T24AH153-0004	
pH ^a	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500 -H+ B AND 1060 B	7.7 (33.3°C)	-
COLOUR (ORIGINAL pH) ^b	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
COLOUR (pH 7.0) ^b	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
ODOUR ^c	-	OBSERVATION METHOD	NONE	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	< 2.0	2.0
CHEMICAL OXYGEN DEMAND ^c	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: PART 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS ^c	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	1,319	25
NITRATE ^c	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: PART 4500-NO ₃ ⁻ E)	2.22	0.09
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM: PART 4500-S ²⁻ F)	< 0.50	0.50
FAT, OIL AND GREASE ^c	mg/L	SOXHLET EXTRACTION METHOD (SM: PART 5520 D)	ND	3
METALS				
ARSENIC ^c	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	ND	0.0003
BARIUM ^c	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: PART 3030 F AND PART 3120 B)	0.065	0.005
CADMIUM ^c	mg/L Cd	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.002
HEXAVALENT CHROMIUM ^c	mg/L Cr ⁶⁺	COLOURIMETRIC METHOD (SM: PART 3500-Cr B)	ND	0.006
TRIVALENT CHROMIUM ^c	mg/L Cr ³⁺	NITRIC ACID DIGESTION, DIRECT AIR ACETYLENE FLAME COLOURIMETRIC (SM: PART 3030 E, PART 3111 B AND PART 3500-Cr B) AND CALCULATION METHOD	ND	0.007



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT INTO COAL YARD WASTEWATER TREATMENT PLANT T24AH153-0004	
COPPER ^c	mg/L Cu	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.005
IRON ^c	mg/L Fe	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.005
LEAD ^c	mg/L Pb	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.015
MANGANESE ^c	mg/L Mn	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.004
MERCURY ^c	mg/L Hg	COLD VAPOUR AAS METHOD (SM: PART 3112 B)	ND	0.0005
NICKEL ^c	mg/L Ni	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.005
SELENIUM ^c	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	0.0102	0.0005
ZINC ^c	mg/L Zn	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.003
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

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 : < LIMIT OF QUANTITATION (IRON ≥ 0.005 AND < 0.100 mg/L, MANGANESE ≥ 0.004 AND < 0.050 mg/L, ZINC ≥ 0.003 AND < 0.050 mg/L).

(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

APRIL 29, 2024

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL MEASURING AND MONITORING PROGRAMME(EMMP) RELATE WITH ISO 14001
CUSTOMER NAME : BLCF POWER LIMITED
ADDRESS : NO. 9, I-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUEANG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@blcp.co.th
SAMPLING SOURCE : COAL YARD WASTEWATER TREATMENT PLANT
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : APRIL 3, 2024
SAMPLING TIME : 11:00 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS KALLAYA SOMPHONG

RECEIVED DATE : APRIL 4, 2024
ANALYTICAL DATE : APRIL 4-25, 2024
ISSUE DATE : APRIL 29, 2024
REPORT NO. : 2024-U035300
WORK NO. : 2021-008701
ANALYSIS NO. : T24AH153-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			EFFLUENT FROM COAL YARD WASTEWATER TREATMENT PLANT T24AH153-0005	
pH ^a	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500 -H+ B AND 1060 B	7.7 (38.0°C)	-
COLOUR (ORIGINAL pH) ^b	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
COLOUR (pH 7.0) ^b	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
ODOUR ^c	-	OBSERVATION METHOD	NONE	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	< 2.0	2.0
CHEMICAL OXYGEN DEMAND ^c	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: PART 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS ^c	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	245	25
NITRATE ^c	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: PART 4500-NO ₃ ⁻ E)	2.48	0.09
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM: PART 4500-S ²⁻ F)	< 0.50	0.50
FAT, OIL AND GREASE ^c	mg/L	SOXHLET EXTRACTION METHOD (SM: PART 5520 D)	ND	3
METALS				
ARSENIC ^c	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	0.0006	0.0003
BARIUM ^c	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: PART 3030 F AND PART 3120 B)	0.027	0.005
CADMIUM ^c	mg/L Cd	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.002
HEXAVALENT CHROMIUM ^c	mg/L Cr ⁶⁺	COLOURIMETRIC METHOD (SM: PART 3500-Cr B)	ND	0.006
TRIVALENT CHROMIUM ^c	mg/L Cr ³⁺	NITRIC ACID DIGESTION, DIRECT AIR ACETYLENE FLAME, COLOURIMETRIC (SM: PART 3030 E, PART 3111 B AND PART 3500-Cr B) AND CALCULATION METHOD	ND	0.007



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			EFFLUENT FROM COAL YARD WASTEWATER TREATMENT PLANT T24AH153-0005	
COPPER ^c	mg/L Cu	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.005
IRON ^c	mg/L Fe	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	0.203	0.005
LEAD ^c	mg/L Pb	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.015
MANGANESE ^c	mg/L Mn	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.004
MERCURY ^c	mg/L Hg	COLD VAPOUR AAS METHOD (SM: PART 3112 B)	ND	0.0005
NICKEL ^c	mg/L Ni	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.005
SELENIUM ^c	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	0.0019	0.0005
ZINC ^c	mg/L Zn	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.003
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

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

(MISS BENJAWAN VIRIYOTHAJ)
LABORATORY SUPERVISOR

APRIL 29, 2024

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL MEASURING AND MONITORING PROGRAMME(EMMP) RELATE WITH ISO 14001
CUSTOMER NAME : BCLP POWER LIMITED
ADDRESS : NO. 9, I-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUEANG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@bclp.co.th
SAMPLING SOURCE : COAL YARD WASTEWATER TREATMENT PLANT
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : MAY 8, 2024
SAMPLING TIME : 15:25 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS KALLAYA SOMPHONG

RECEIVED DATE : MAY 9, 2024
ANALYTICAL DATE : MAY 9-18, 2024
ISSUE DATE : MAY 28, 2024
REPORT NO. : 2024-U045185
WORK NO. : 2021-008701
ANALYSIS NO. : T24AJ687-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT INTO COAL YARD WASTEWATER TREATMENT PLANT T24AJ687-0004	
pH	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500 -H ⁺ B AND 1060 B	8.0 (35.1°C)	-
COLOUR (ORIGINAL pH)	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
COLOUR (pH 7.0)	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
ODOUR	-	OBSERVATION METHOD	NONE	-
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	< 2.0	2.0
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: PART 5220 D)	53.2	25.0
TOTAL SUSPENDED SOLIDS	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	37.9	5.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	392	25
NITRATE	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: PART 4500-NO ₃ ⁻ E)	0.62	0.09
SULPHIDE	mg/L	IODOMETRIC METHOD (SM: PART 4500-S ₂ ²⁻ F)	< 0.50	0.50
FAT, OIL AND GREASE	mg/L	SOXHLET EXTRACTION METHOD (SM: PART 5520 D)	ND	3
METALS				
ARSENIC	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	0.0010	0.0003
BARIUM	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: PART 3030 F AND PART 3120 B)	0.051	0.005
CADMIUM	mg/L Cd	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.002
HEXAVALENT CHROMIUM	mg/L Cr ⁶⁺	COLOURIMETRIC METHOD (SM: PART 3500-Cr B)	ND	0.006
TRIVALENT CHROMIUM	mg/L Cr ³⁺	NITRIC ACID DIGESTION, DIRECT AIR ACETYLENE FLAME, COLOURIMETRIC (SM: PART 3030 E, PART 3111 B AND PART 3500-Cr B) AND CALCULATION METHOD	ND	0.007



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT INTO COAL YARD WASTEWATER TREATMENT PLANT T24AJ687-0004	
COPPER	mg/L Cu	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.005
IRON	mg/L Fe	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	0.257	0.005
LEAD	mg/L Pb	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.015
MANGANESE	mg/L Mn	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	0.072	0.004
MERCURY	mg/L Hg	COLD VAPOUR AAS METHOD (SM: PART 3112 B)	ND	0.0005
NICKEL	mg/L Ni	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.005
SELENIUM	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	0.0044	0.0005
ZINC	mg/L Zn	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	0.350	0.003
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID BLACK	

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 : < LIMIT OF QUANTITATION (COPPER ≥ 0.005 AND < 0.050 mg/L, NICKEL ≥ 0.005 AND < 0.100 mg/L).

(MISS BENJAWAN VIRIYOTHA)
 LABORATORY SUPERVISOR

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL MEASURING AND MONITORING PROGRAMME(EMMP) RELATE WITH ISO 14001
CUSTOMER NAME : BLCF POWER LIMITED
ADDRESS : NO. 9, I-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUEANG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@blcp.co.th
SAMPLING SOURCE : COAL YARD WASTEWATER TREATMENT PLANT
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : MAY 8, 2024
SAMPLING TIME : 15:15 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS KALLAYA SOMPHONG

RECEIVED DATE : MAY 9, 2024
ANALYTICAL DATE : MAY 9-18, 2024
ISSUE DATE : MAY 28, 2024
REPORT NO. : 2024-U045186
WORK NO. : 2021-008701
ANALYSIS NO. : T24AJ687-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			EFFLUENT FROM COAL YARD WASTEWATER TREATMENT PLANT T24AJ687-0005	
pH	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500 -H ⁺ B AND 1060 B	8.1 (33.0°C)	-
COLOUR (ORIGINAL pH)	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
COLOUR (pH 7.0)	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
ODOUR	-	OBSERVATION METHOD	NONE	-
BIOCHEMICAL OXYGEN DEMAND	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	2.3	2.0
CHEMICAL OXYGEN DEMAND	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: PART 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	5.0
TOTAL DISSOLVED SOLIDS	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	726	25
NITRATE	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: PART 4500-NO ₃ ⁻ E)	0.58	0.09
SULPHIDE	mg/L	IODOMETRIC METHOD (SM: PART 4500-S ²⁻ F)	< 0.50	0.50
FAT, OIL AND GREASE	mg/L	SOXHLET EXTRACTION METHOD (SM: PART 5520 D)	ND	3
METALS				
ARSENIC	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	0.0004	0.0003
BARIIUM	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: PART 3030 F AND PART 3120 B)	0.050	0.005
CADMIUM	mg/L Cd	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.002
HEXAVALENT CHROMIUM	mg/L Cr ⁶⁺	COLOURIMETRIC METHOD (SM: PART 3500-Cr B)	ND	0.006
TRIVALENT CHROMIUM	mg/L Cr ³⁺	NITRIC ACID DIGESTION, DIRECT AIR ACETYLENE FLAME, COLOURIMETRIC (SM: PART 3030 E, PART 3111 B AND PART 3500-Cr B) AND CALCULATION METHOD	ND	0.007



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			EFFLUENT FROM COAL YARD WASTEWATER TREATMENT PLANT T24AJ687-0005	
COPPER	mg/L Cu	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.005
IRON	mg/L Fe	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	0.112	0.005
LEAD	mg/L Pb	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.015
MANGANESE	mg/L Mn	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	0.004
MERCURY	mg/L Hg	COLD VAPOUR AAS METHOD (SM: PART 3112 B)	ND	0.0005
NICKEL	mg/L Ni	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	ND	0.005
SELENIUM	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	0.0041	0.0005
ZINC	mg/L Zn	IN-HOUSE METHOD: UAE.TP.IW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	0.079	0.003
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR BROWN	

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

(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL MEASURING AND MONITORING PROGRAMME(EMMP) RELATE WITH ISO 14001
CUSTOMER NAME : BLCP POWER LIMITED
ADDRESS : NO. 9, I-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUEANG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@blcp.co.th
SAMPLING SOURCE : COAL YARD WASTEWATER TREATMENT PLANT
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : JUNE 5, 2024
SAMPLING TIME : 14:28 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : MR. ANUSART SUAYDEE
ANALYZED BY : MISS KALLAYA SOMPHONG

RECEIVED DATE : JUNE 6, 2024
ANALYTICAL DATE : JUNE 6-20, 2024
ISSUE DATE : JUNE 25, 2024
REPORT NO. : 2024-U056364
WORK NO. : 2021-008701
ANALYSIS NO. : T24AM281-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT INTO COAL YARD WASTEWATER TREATMENT PLANT T24AM281-0004	
pH ^a	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500 -H ⁺ B AND 1060 B	8.7 (34.6°C)	-
COLOUR (ORIGINAL pH) ^c	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
COLOUR (pH 7.0) ^c	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
ODOUR ^c	-	OBSERVATION METHOD	NONE	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	4.0	2.0
CHEMICAL OXYGEN DEMAND ^a	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: PART 5220 D)	36.9	25.0
TOTAL SUSPENDED SOLIDS ^a	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	16.7	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	836	25
NITRATE ^c	mg/L NO ₃	CADMIUM REDUCTION METHOD (SM: PART 4500-NO ₃ ⁻ E)	0.66	0.09
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM: PART 4500-S ²⁻ F)	< 0.50	0.50
FAT, OIL AND GREASE ^c	mg/L	SOXHLET EXTRACTION METHOD (SM: PART 5520 D)	ND	3
METALS				
ARSENIC ^c	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	0.0170	0.0003
BARIUM ^c	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: PART 3030 F AND PART 3120 B)	0.068	0.005
CADMIUM ^a	mg/L Cd	UAE.TP.HEM.004 BASED ON SM: PART 3030 E AND PART 3111 B	ND	0.005
HEXAVALENT CHROMIUM ^c	mg/L Cr ⁶⁺	COLOURIMETRIC METHOD (SM: PART 3500-Cr B)	ND	0.006
TRIVALENT CHROMIUM ^c	mg/L Cr ³⁺	NITRIC ACID DIGESTION, DIRECT AIR ACETYLENE FLAME, COLOURIMETRIC (SM: PART 3030 E, PART 3111 B AND PART 3500-Cr B) AND CALCULATION METHOD	ND	0.007
COPPER ^a	mg/L Cu	UAE.TP.HEM.004 BASED ON SM: PART 3030 E AND PART 3111 B	ND	0.005



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT INTO COAL YARD WASTEWATER TREATMENT PLANT T24AM281-0004	
IRON ^a	mg/L Fe	UAE.TP.HEM.004 BASED ON SM: PART 3030 E AND PART 3111 B	< LOQ	0.005
LEAD ^a	mg/L Pb	UAE.TP.HEM.004 BASED ON SM: PART 3030 E AND PART 3111 B	ND	0.020
MANGANESE ^a	mg/L Mn	UAE.TP.HEM.004 BASED ON SM: PART 3030 E AND PART 3111 B	< LOQ	0.005
MERCURY ^c	mg/L Hg	COLD VAPOUR AAS METHOD (SM: PART 3112 B)	ND	0.0005
NICKEL ^a	mg/L Ni	UAE.TP.HEM.004 BASED ON SM: PART 3030 E AND PART 3111 B	ND	0.005
SELENIUM ^c	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	0.0052	0.0005
ZINC ^a	mg/L Zn	UAE.TP.HEM.004 BASED ON SM: PART 3030 E AND PART 3111 B	< LOQ	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

SM : STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, APHA, AWWA, WEF, 24th EDITION, 2023.

ND : NOT DETECTED.

< LOQ : < LIMIT OF QUANTITATION (IRON ≥ 0.005 AND < 0.100 mg/L, MANGANESE ≥ 0.005 AND < 0.050 mg/L, ZINC ≥ 0.003 AND < 0.050 mg/L).

(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL MEASURING AND MONITORING PROGRAMME(EMMP) RELATE WITH ISO 14001
CUSTOMER NAME : BLCF POWER LIMITED
ADDRESS : NO. 9, I-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUEANG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@bclp.co.th
SAMPLING SOURCE : COAL YARD WASTEWATER TREATMENT PLANT
SAMPLE TYPE : WASTEWATER
SAMPLING DATE : JUNE 5, 2024
SAMPLING TIME : 14:24 HOUR
SAMPLING METHOD : GRAB
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS KALLAYA SOMPHONG

RECEIVED DATE : JUNE 6, 2024
ANALYTICAL DATE : JUNE 6-20, 2024
ISSUE DATE : JUNE 25, 2024
REPORT NO. : 2024-U056365
WORK NO. : 2021-008701
ANALYSIS NO. : T24AM281-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			EFFLUENT FROM COAL YARD WASTEWATER TREATMENT PLANT T24AM281-0005	
pH ^a	-	ELECTROMETRIC METHOD (AT SITE) SM: PART 4500 -H ⁺ B AND 1060 B	8.4 (32.9°C)	-
COLOUR (ORIGINAL pH) ^c	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
COLOUR (pH 7.0) ^c	ADMI	ADMI WEIGHTED-ORDINATE SPECTROPHOTOMETRIC METHOD (SM: PART 2120 F)	< 10	10
ODOUR ^c	-	OBSERVATION METHOD	NONE	-
BIOCHEMICAL OXYGEN DEMAND ^c	mg/L	AZIDE MODIFICATION METHOD (SM: PART 5210 B AND PART 4500-O C)	< 2.0	2.0
CHEMICAL OXYGEN DEMAND ^c	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: PART 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS ^c	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	5.0
TOTAL DISSOLVED SOLIDS ^b	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	774	25
NITRATE ^c	mg/L NO ₃ ⁻	CADMIUM REDUCTION METHOD (SM: PART 4500-NO ₃ ⁻ E)	0.71	0.09
SULPHIDE ^b	mg/L	IODOMETRIC METHOD (SM: PART 4500-S ²⁻ F)	< 0.50	0.50
FAT, OIL AND GREASE ^c	mg/L	SOXHLET EXTRACTION METHOD (SM: PART 5520 D)	ND	3
METALS				
ARSENIC ^c	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	0.0040	0.0003
BARIUM ^c	mg/L Ba	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: PART 3030 F AND PART 3120 B)	0.059	0.005
CADMIUM ^b	mg/L Cd	UAE.TP.HEM.004 BASED ON SM: PART 3030 E AND PART 3111 B	ND	0.005
HEXAVALENT CHROMIUM ^c	mg/L Cr ⁶⁺	COLOURIMETRIC METHOD (SM: PART 3500-Cr B)	ND	0.006
TRIVALENT CHROMIUM ^c	mg/L Cr ³⁺	NITRIC ACID DIGESTION, DIRECT AIR ACETYLENE FLAME, COLOURIMETRIC (SM: PART 3030 E, PART 3111 B AND PART 3500-Cr B) AND CALCULATION METHOD	ND	0.007
COPPER ^b	mg/L Cu	UAE.TP.HEM.004 BASED ON SM: PART 3030 E AND PART 3111 B	ND	0.005



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			EFFLUENT FROM COAL YARD WASTEWATER TREATMENT PLANT T24AM281-0005	
IRON ^a	mg/L Fe	UAE.TP.HEM.004 BASED ON SM: PART 3030 E AND PART 3111 B	< LOQ	0.005
LEAD ^a	mg/L Pb	UAE.TP.HEM.004 BASED ON SM: PART 3030 E AND PART 3111 B	ND	0.020
MANGANESE ^a	mg/L Mn	UAE.TP.HEM.004 BASED ON SM: PART 3030 E AND PART 3111 B	0.055	0.005
MERCURY ^c	mg/L Hg	COLD VAPOUR AAS METHOD (SM: PART 3112 B)	ND	0.0005
NICKEL ^a	mg/L Ni	UAE.TP.HEM.004 BASED ON SM: PART 3030 E AND PART 3111 B	ND	0.005
SELENIUM ^c	mg/L Se	HYDRIDE GENERATION AAS METHOD (SM: PART 3114 C)	0.0038	0.0005
ZINC ^a	mg/L Zn	UAE.TP.HEM.004 BASED ON SM: PART 3030 E AND PART 3111 B	ND	0.003
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, 24th EDITION, 2023.
ND : NOT DETECTED.
< LOQ : < LIMIT OF QUANTITATION (IRON ≥ 0.005 AND < 0.100 mg/L).

(MISS BENJAWAN VIRIYOTHAI)
LABORATORY SUPERVISOR

ภาคผนวก ช-3

ผลการติดตามตรวจสอบคุณภาพน้ำทะเล

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL QUALITY MONITORING DURING OPERATION PERIOD OF COAL UNLOADING FACILITIES PROJECT
CUSTOMER NAME : BLCF POWER LIMITED
ADDRESS : NO. 9, I-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUEANG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@blcp.co.th
SAMPLING SOURCE : IEAT PORT APPROACH CHANNEL
SAMPLE TYPE : SEAWATER
SAMPLING DATE : APRIL 4, 2024
SAMPLING TIME : 10:00 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR. ANUSART SUAYDEE
ANALYZED BY : MISS NAPAPORN KHUNNOKKHUM

RECEIVED DATE : APRIL 5, 2024
ANALYTICAL DATE : APRIL 5-18, 2024
ISSUE DATE : APRIL 19, 2024
REPORT NO. : 2024-U032271
WORK NO. : 2021-008698
ANALYSIS NO. : T24AH263-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			IEAT PORT APPROACH CHANNEL T24AH263-0001	
FLOATABLE SOLID	-	OBSERVATION METHOD	NOT VISIBLE	-
TRANSPARENCY	m	SECCHI DISC	4.0	-
SUSPENDED SOLIDS	mg/L	GRAVIMETRIC METHOD (SM: PART 2540 D)	2.9	1.0
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR YELLOW	

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

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 22, 2024



ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL QUALITY MONITORING DURING OPERATION PERIOD OF COAL UNLOADING FACILITIES PROJECT
CUSTOMER NAME : BLCF POWER LIMITED
ADDRESS : NO. 9, I-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUEANG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@blcp.co.th
SAMPLING SOURCE : CONSTRUCTION BERTH
SAMPLE TYPE : SEAWATER
SAMPLING DATE : APRIL 4, 2024
SAMPLING TIME : 10:15 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR. ANUSART SUAYDEE
ANALYZED BY : MISS NAPAPORN KHUNNOKKHUM

RECEIVED DATE : APRIL 5, 2024
ANALYTICAL DATE : APRIL 5-10, 2024
ISSUE DATE : APRIL 19, 2024
REPORT NO. : 2024-U032272
WORK NO. : 2021-008698
ANALYSIS NO. : T24AH263-0002

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			CONSTRUCTION BERTH T24AH263-0002	
FLOATABLE SOLID	-	OBSERVATION METHOD	NOT VISIBLE	-
TRANSPARENCY	m	SECCHI DISC	4.0	-
SUSPENDED SOLIDS	mg/L	GRAVIMETRIC METHOD (SM: PART 2540 D)	4.2	1.0
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN	

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

(MRS PIYAPAT SUTTAMANUTWONG)
LABORATORY SUPERVISOR

APRIL 22, 2024



ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL QUALITY MONITORING DURING OPERATION PERIOD OF COAL UNLOADING FACILITIES PROJECT
CUSTOMER NAME : BLCP POWER LIMITED
ADDRESS : NO. 9, I-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUENG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@blcp.co.th
SAMPLING SOURCE : WEST SIDE OF KOH SAKET
SAMPLE TYPE : SEAWATER
SAMPLING DATE : APRIL 3, 2024
SAMPLING TIME : 14:00 HOUR
SAMPLING METHOD : COMPOSITE
SAMPLING BY : MR ANUSART SUAYDEE
ANALYZED BY : MISS NAPAPORN KHUNNOKKHUM

RECEIVED DATE : APRIL 4, 2024
ANALYTICAL DATE : APRIL 4-24, 2024
ISSUE DATE : MAY 10, 2024
REPORT NO. : 2024-U039646
WORK NO. : 2021-008698
ANALYSIS NO. : T24AJ030-0001

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			WEST SIDE OF KOH SAKET T24AJ030-0001	
FLOATABLE SOLID	-	OBSERVATION METHOD	NOT VISIBLE	-
TRANSPARENCY	m	SECCHI DISC	2.0	-
SUSPENDED SOLIDS	mg/L	GRAVIMETRIC METHOD (SM: PART 2540 D)	6.3	1.0
SAMPLE CONDITION WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR YELLOW	

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

(MRS PIYAPAT SUTTAMANUTWONG)
 LABORATORY SUPERVISOR



ภาคผนวก ช-4

ผลการติดตามตรวจสอบระดับเสี่ยงในสถานประกอบการ

ANALYSIS REPORT

PROJECT NAME : ENVIRONMENTAL QUALITY MONITORING DURING OPERATION PERIOD OF COAL UNLOADING FACILITIES PROJECT
CUSTOMER NAME : BLCF POWER COMPANY LIMITED
ADDRESS : NO. 9, I-8 ROAD, P.O. BOX 92, MAP TA PHUT INDUSTRIAL ESTATE, MAP TA PHUT MUEANG RAYONG RAYONG 21150
CONTACT INFORMATION : TEL : 0 3891 8507 e-mail : environment@blcp.co.th
MEASURING PLACE : BLCF POWER COMPANY LIMITED
MEASURING TYPE : WORKPLACE (NOISE)
MEASURING DATE : APRIL 24, 2024
MEASURING TIME : *
MEASURING EQUIPMENT : INTEGRATED SOUND LEVEL METER
MEASURED BY : MR TOSSAPORN TANAPIRUN

RECEIVED DATE : APRIL 24, 2024
ANALYTICAL DATE : APRIL 24, 2024
ISSUE DATE : MAY 2, 2024
REPORT NO. : 2024-U036466
WORK NO. : 2021-008698
ANALYSIS NO. : T24AI714-0001

ANALYSIS NO.	MEASURING SITE	TIME* (HOUR)	RESULT (dB(A))	
			L _{Aeq} 8 hours	L _{Amax} 8 hours
T24AI714-0001	CONSTRUCTION BERTH	09:45-17:45	70.5	96.3

(MR NATTAWAT DANGSAWAT)
LABORATORY SUPERVISOR

