

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : JANUARY 4, 2022  
**SAMPLING TIME** : 14:49 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JANUARY 5, 2022  
**ANALYTICAL DATE** : JANUARY 5-10, 2022  
**REPORT NO.** : 2022-U003168  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AA060-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT T22AA060-0003	
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	6.7 (30°C)	-
ELECTRICAL CONDUCTIVITY <sup>c</sup>	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,512 (28°C)	0.1
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O <sub>2</sub> G AND 5210 B)	43.6	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	62.6	25.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	42.0	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	2,507	25
FLUORIDE <sup>c</sup>	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	12.7	0.04
<b>SAMPLE CONDITION</b>				
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

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

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHA)  
LABORATORY SUPERVISOR

JANUARY 14, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JANUARY 4, 2022  
**SAMPLING TIME** : 14:40 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JANUARY 5, 2022  
**ANALYTICAL DATE** : JANUARY 5-10, 2022  
**REPORT NO.** : 2022-U003169  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AA060-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT T22AA060-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	6.6 (30°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,743 (29°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	30.0	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	2,852	≤ 3,000	25
FLUORIDE °	mg/L F-	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	6.28	-	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHA)  
LABORATORY SUPERVISOR

JANUARY 14, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JANUARY 4, 2022  
**SAMPLING TIME** : 14:30 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AKSARIN BUNKONG

**RECEIVED DATE** : JANUARY 5, 2022  
**ANALYTICAL DATE** : JANUARY 5-11, 2022  
**REPORT NO.** : 2022-U003170  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AA060-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AA060-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.7 (30°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	2,193	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	6.29	-	0.04
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0014	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.009	-	0.001





PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AA060-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<b>SAMPLE CONDITION</b>					
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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHAI)  
LABORATORY SUPERVISOR

JANUARY 14, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : JANUARY 11, 2022  
**SAMPLING TIME** : 15:00 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JANUARY 12, 2022  
**ANALYTICAL DATE** : JANUARY 12-18, 2022  
**REPORT NO.** : 2022-U004693  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AA550-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT#2 T22AA550-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H* B)	7.0 (30°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,800 (30°C)	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	15.2	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,244	25
FLUORIDE °	mg/L F-	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F- C)	3.08	0.04
<b>SAMPLE CONDITION</b>				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
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

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 21, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JANUARY 11, 2022  
**SAMPLING TIME** : 14:50 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JANUARY 12, 2022  
**ANALYTICAL DATE** : JANUARY 12-18, 2022  
**REPORT NO.** : 2022-U004694  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AA550-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AA550-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.8 (30°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,710 (30°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	4.9	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103- 105 °C (SM: 2540 D)	15.5	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	2,785	≤ 3,000	25
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F °C)	3.29	-	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

JANUARY 21, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JANUARY 11, 2022  
**SAMPLING TIME** : 14:40 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AKSARIN BUNKONG

**RECEIVED DATE** : JANUARY 12, 2022  
**ANALYTICAL DATE** : JANUARY 12-18, 2022  
**REPORT NO.** : 2022-U004695  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AA550-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AA550-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	8.3 (30°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	4.8	≤ 20	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	396	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	4.71	-	0.04
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0013	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.008	-	0.001





PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AA550-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.003	≤ 0.2	0.002
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

JANUARY 21, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : JANUARY 25, 2022  
**SAMPLING TIME** : 09:48 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JANUARY 25, 2022  
**ANALYTICAL DATE** : JANUARY 25-31, 2022  
**REPORT NO.** : 2022-U008188  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AB371-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT#2 T22AB371-0003	
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.2 (31°C)	-
ELECTRICAL CONDUCTIVITY <sup>c</sup>	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,108 (31°C)	0.1
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	7.4	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	12.1	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,359	25
FLUORIDE <sup>c</sup>	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	3.68	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/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.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 4, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JANUARY 25, 2022  
**SAMPLING TIME** : 09:40 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JANUARY 25, 2022  
**ANALYTICAL DATE** : JANUARY 25-31, 2022  
**REPORT NO.** : 2022-U008189  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AB371-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT #2 T22AB371-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.5 (30°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,712 (30°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	5.8	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103- 105 °C (SM: 2540 D)	8.8	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	2,708	≤ 3,000	25
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	4.14	-	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 4, 2022





## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JANUARY 25, 2022  
**SAMPLING TIME** : 09:23 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AKSARIN BUNKONG

**RECEIVED DATE** : JANUARY 25, 2022  
**ANALYTICAL DATE** : JANUARY 25-31, 2022  
**REPORT NO.** : 2022-U008191  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AB371-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AB371-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	8.3 (29°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	828	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	4.01	-	0.04
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0014	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.008	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AB371-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 4, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : JANUARY 18, 2022  
**SAMPLING TIME** : 13:50 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JANUARY 19, 2022  
**ANALYTICAL DATE** : JANUARY 19-26, 2022  
**REPORT NO.** : 2022-U008423  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AA998-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT #2 T22AA998-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.0 (31°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,697 (31°C)	0.1
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	31	-
DISSOLVED OXYGEN °	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	5.8	0.5
FLOW RATE* °	m³/s	CURRENT METER AND CALCULATION	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,590	25
CHLORIDE °	mg/L Cl⁻	ARGENTOMETRIC METHOD (SM: 4500-Cl⁻ B)	200	2.0
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S²⁻ F)	ND	0.50
FLUORIDE °	mg/L F⁻	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F⁻ C)	5.08	0.04
TOTAL KJELDAHL NITROGEN °	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	5.6	1.5
FAT, OIL AND GREASE °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D)	ND	3
CYANIDE °	mg/L CN⁻	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN⁻ C AND 4500-CN⁻ E)	0.204	0.005
PHENOLS °	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 D)	ND	0.1
FORMALDEHYDE °	mg/L	DISTILLATION AND COLOURIMETRIC METHOD	ND	0.05
RESIDUAL FREE CHLORINE °	mg/L Cl₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	0.1
<b>METALS</b>				
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0015	0.0003
MERCURY °	mg/L Hg	COLD VAPOUR AAS METHOD (SM: 3112 B)	ND	0.0005
HEXAVALENT CHROMIUM °	mg/L Cr⁶⁺	COLOURIMETRIC METHOD (SM: 3500-Cr B)	ND	0.006
ALUMINUM °	mg/L Al	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.708	0.010





PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT #2 T22AA998-0003	
CADMIUM <sup>c</sup>	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.001
COPPER <sup>c</sup>	mg/L Cu	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.020	0.001
IRON <sup>c</sup>	mg/L Fe	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.079	0.002
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.002
MANGANESE <sup>c</sup>	mg/L Mn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.023	0.001
NICKEL <sup>c</sup>	mg/L Ni	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.006	0.001
SILVER <sup>c</sup>	mg/L Ag	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.005
ZINC <sup>c</sup>	mg/L Zn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.021	0.001
<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

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.

\* : FLOW RATE CANNOT BE MEASURED.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 8, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JANUARY 18, 2022  
**SAMPLING TIME** : 13:35 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JANUARY 19, 2022  
**ANALYTICAL DATE** : JANUARY 19-26, 2022  
**REPORT NO.** : 2022-U008424  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AA998-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT #2 T22AA998-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.4 (30°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,217 (30°C)	-	0.1
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	30	≤ 40	-
DISSOLVED OXYGEN °	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	5.5	-	0.5
FLOW RATE °	m³/s	CURRENT METER AND CALCULATION	-	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	6.0	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	10.0	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,380	≤ 3,000	25
CHLORIDE °	mg/L Cl⁻	ARGENTOMETRIC METHOD (SM: 4500-Cl B)	187	-	2.0
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S²- F)	ND	≤ 1	0.50
FLUORIDE °	mg/L F⁻	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	4.46	-	0.04
TOTAL KJELDAHL NITROGEN °	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	< LOQ	≤ 100	1.5
FAT, OIL AND GREASE °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D)	ND	≤ 5	3
CYANIDE °	mg/L CN⁻	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN° C AND 4500-CN° E)	0.138	≤ 0.2	0.005
PHENOLS °	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 D)	ND	≤ 1	0.1
FORMALDEHYDE °	mg/L	DISTILLATION AND COLOURIMETRIC METHOD	ND	≤ 1	0.05
RESIDUAL FREE CHLORINE °	mg/L Cl₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	0.1	≤ 1	0.1



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT #2 T22AA998-0004		
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0020	≤ 0.25	0.0003
MERCURY °	mg/L Hg	COLD VAPOUR AAS METHOD (SM: 3112 B)	ND	≤ 0.005	0.0005
HEXAVALENT CHROMIUM °	mg/L Cr <sup>6+</sup>	COLOURIMETRIC METHOD (SM: 3500-Cr B)	ND	≤ 0.25	0.006
ALUMINUM °	mg/L Al	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.942	-	0.010
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
COPPER °	mg/L Cu	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.017	≤ 2.0	0.001
IRON °	mg/L Fe	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.098	-	0.002
LEAD °	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.002	≤ 0.2	0.002
MANGANESE °	mg/L Mn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.027	≤ 5.0	0.001
NICKEL °	mg/L Ni	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.009	≤ 1.0	0.001
SILVER °	mg/L Ag	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	-	0.005



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT #2 T22AA998-0004		
ZINC <sup>c</sup>	mg/L Zn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.031	≤ 5.0	0.001
<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

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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

\* : FLOW RATE CANNOT BE MEASURED.

ND : NON-DETECTABLE.

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

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 8, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JANUARY 18, 2022  
**SAMPLING TIME** : 13:15 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS KALLAYA SOMPHONG

**RECEIVED DATE** : JANUARY 19, 2022  
**ANALYTICAL DATE** : JANUARY 19-26, 2022  
**REPORT NO.** : 2022-U008425  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AA998-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AA998-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	8.0 (30°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	334	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	4.44	-	0.04
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0015	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.009	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AA998-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<b>SAMPLE CONDITION</b>					
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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 8, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : FEBRUARY 1, 2022  
**SAMPLING TIME** : 14:15 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : FEBRUARY 1, 2022  
**ANALYTICAL DATE** : FEBRUARY 1-8, 2022  
**REPORT NO.** : 2022-U010278  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AB782-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT#2 T22AB782-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H* B)	6.5 (31°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,490 (31°C)	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	7.8	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	24.4	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	2,834	25
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	5.88	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN	

° : 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

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 11, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : FEBRUARY 1, 2022  
**SAMPLING TIME** : 14:08 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : FEBRUARY 1, 2022  
**ANALYTICAL DATE** : FEBRUARY 1-8, 2022  
**REPORT NO.** : 2022-U010279  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AB782-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AB782-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.4 (32°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,624 (32°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	5.6	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	5.7	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,214	≤ 3,000	25
FLUORIDE °	mg/L F°	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F° C)	5.58	-	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 11, 2022



## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED	<b>RECEIVED DATE</b>	: FEBRUARY 1, 2022
<b>ADDRESS</b>	: 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310	<b>ANALYTICAL DATE</b>	: FEBRUARY 1-10, 2022
<b>CONTACT INFORMATION</b>	: TEL : 0 2318 6788 e-mail : dusadee_kpy@hotmail.com	<b>REPORT NO.</b>	: 2022-U010280
<b>SAMPLING SOURCE</b>	: BOWIN	<b>WORK NO.</b>	: 2021-008810
<b>SAMPLE TYPE</b>	: EFFLUENT	<b>ANALYSIS NO.</b>	: T22AB782-0005
<b>SAMPLING DATE</b>	: FEBRUARY 1, 2022		
<b>SAMPLING TIME</b>	: 13:57 HOUR		
<b>SAMPLING METHOD °</b>	: GRAB		
<b>SAMPLING BY °</b>	: MR NAPASIT SRIPIM		
<b>ANALYZED BY</b>	: MISS AKSARIN BUNKONG		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AB782-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	8.3 (32°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	3.9	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	518	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F° C)	5.22	-	0.04
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0016	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.011	-	0.001





PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AB782-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 11, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : FEBRUARY 8, 2022  
**SAMPLING TIME** : 09:32 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : FEBRUARY 8, 2022  
**ANALYTICAL DATE** : FEBRUARY 8-15, 2022  
**REPORT NO.** : 2022-U011613  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AC184-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT#2 T22AC184-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H* B)	7.2 (30°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,970 (30°C)	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	17.5	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,087	25
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	5.38	0.04
<b>SAMPLE CONDITION</b>				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
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

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 18, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : FEBRUARY 8, 2022  
**SAMPLING TIME** : 09:23 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : FEBRUARY 8, 2022  
**ANALYTICAL DATE** : FEBRUARY 8-15, 2022  
**REPORT NO.** : 2022-U011614  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AC184-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AC184-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.5 (30°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,655 (30°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	5.6	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	20.4	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,806	≤ 3,000	25
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	5.78	-	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 18, 2022





## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED	<b>RECEIVED DATE</b>	: FEBRUARY 8, 2022
<b>ADDRESS</b>	: 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310	<b>ANALYTICAL DATE</b>	: FEBRUARY 8-15, 2022
<b>CONTACT INFORMATION</b>	: TEL : 0 2318 6788 e-mail : dusadee_kpy@hotmail.com	<b>REPORT NO.</b>	: 2022-U011615
<b>SAMPLING SOURCE</b>	: BOWIN	<b>WORK NO.</b>	: 2021-008810
<b>SAMPLE TYPE</b>	: EFFLUENT	<b>ANALYSIS NO.</b>	: T22AC184-0005
<b>SAMPLING DATE</b>	: FEBRUARY 8, 2022		
<b>SAMPLING TIME</b>	: 09:16 HOUR		
<b>SAMPLING METHOD °</b>	: GRAB		
<b>SAMPLING BY °</b>	: MR NAPASIT SRIPIM		
<b>ANALYZED BY</b>	: MISS AKSARIN BUNKONG		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AC184-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	8.6 (29°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	2.1	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	585	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F° C)	5.30	-	0.04
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0014	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.012	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AC184-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 18, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : FEBRUARY 15, 2022  
**SAMPLING TIME** : 10:15 HOUR  
**SAMPLING METHOD** ° : GRAB  
**SAMPLING BY** ° : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : FEBRUARY 15, 2022  
**ANALYTICAL DATE** : FEBRUARY 15-25, 2022  
**REPORT NO.** : 2022-U014132  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AC708-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT#2 T22AC708-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.4 (30°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD (SM: 2510 B)	3,600 (25°C)	0.1
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	30	-
DISSOLVED OXYGEN °	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	5.1	0.5
FLOW RATE* °	m³/s	CURRENT METER AND CALCULATION	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	2.4	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	7.4	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,190	25
CHLORIDE °	mg/L Cl⁻	ARGENTOMETRIC METHOD (SM: 4500-Cl⁻ B)	265	2.0
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S²- F)	ND	0.50
FLUORIDE °	mg/L F⁻	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F⁻ C)	3.08	0.04
TOTAL KJELDAHL NITROGEN °	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	< LOQ	1.5
FAT, OIL AND GREASE °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D)	ND	3
CYANIDE °	mg/L CN⁻	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN⁻ C AND 4500-CN⁻ E)	0.236	0.005
PHENOLS °	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 D)	ND	0.1
FORMALDEHYDE °	mg/L	DISTILLATION AND COLOURIMETRIC METHOD	ND	0.05
RESIDUAL FREE CHLORINE °	mg/L Cl₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	0.1
<b>METALS</b>				
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0020	0.0003
MERCURY °	mg/L Hg	COLD VAPOUR AAS METHOD (SM: 3112 B)	ND	0.0005
HEXAVALENT CHROMIUM °	mg/L Cr⁶⁺	COLOURIMETRIC METHOD (SM: 3500-Cr B)	ND	0.006
ALUMINUM °	mg/L Al	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.888	0.010





PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT#2 T22AC708-0003	
CADMIUM <sup>c</sup>	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.001
COPPER <sup>c</sup>	mg/L Cu	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.021	0.001
IRON <sup>c</sup>	mg/L Fe	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.384	0.002
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.003	0.002
MANGANESE <sup>c</sup>	mg/L Mn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.017	0.001
NICKEL <sup>c</sup>	mg/L Ni	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.003	0.001
SILVER <sup>c</sup>	mg/L Ag	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.005
ZINC <sup>c</sup>	mg/L Zn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.053	0.001
<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

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.

\* : FLOW RATE CANNOT BE MEASURED.

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

FEBRUARY 28, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : FEBRUARY 15, 2022  
**SAMPLING TIME** : 10:01 HOUR  
**SAMPLING METHOD** : GRAB  
**SAMPLING BY** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : FEBRUARY 15, 2022  
**ANALYTICAL DATE** : FEBRUARY 15-25, 2022  
**REPORT NO.** : 2022-U014133  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AC708-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AC708-0004		
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.6 (29°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY <sup>c</sup>	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD (SM: 2510 B)	3,960 (25°C)	-	0.1
TEMPERATURE <sup>c</sup>	°C	THERMOMETER AT SITE (SM: 2550 B)	29	≤ 40	-
DISSOLVED OXYGEN <sup>c</sup>	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	6.1	-	0.5
FLOW RATE <sup>c</sup>	m <sup>3</sup> /s	CURRENT METER AND CALCULATION	-	-	-
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	3.5	≤ 20	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	7.6	≤ 50	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,263	≤ 3,000	25
CHLORIDE <sup>c</sup>	mg/L Cl <sup>-</sup>	ARGENTOMETRIC METHOD (SM: 4500-Cl <sup>-</sup> B)	262	-	2.0
SULPHIDE <sup>c</sup>	mg/L	IODOMETRIC METHOD (SM: 4500-S <sup>2-</sup> F)	ND	≤ 1	0.50
FLUORIDE <sup>c</sup>	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	3.19	-	0.04
TOTAL KJELDAHL NITROGEN <sup>b</sup>	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	< LOQ	≤ 100	1.5
FAT, OIL AND GREASE <sup>c</sup>	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D)	ND	≤ 5	3
CYANIDE <sup>c</sup>	mg/L CN <sup>-</sup>	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN <sup>-</sup> C AND 4500 -CN <sup>-</sup> E)	0.346	≤ 0.2	0.005
PHENOLS <sup>c</sup>	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 D)	ND	≤ 1	0.1
FORMALDEHYDE <sup>c</sup>	mg/L	DISTILLATION AND COLOURIMETRIC METHOD	ND	≤ 1	0.05
RESIDUAL FREE CHLORINE <sup>c</sup>	mg/L Cl <sub>2</sub>	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	0.2	≤ 1	0.1



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AC708-0004		
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0020	≤ 0.25	0.0003
MERCURY °	mg/L Hg	COLD VAPOUR AAS METHOD (SM: 3112 B)	ND	≤ 0.005	0.0005
HEXAVALENT CHROMIUM °	mg/L Cr <sup>6+</sup>	COLOURIMETRIC METHOD (SM: 3500-Cr B)	ND	≤ 0.25	0.006
ALUMINUM °	mg/L Al	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.641	-	0.010
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
COPPER °	mg/L Cu	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.018	≤ 2.0	0.001
IRON °	mg/L Fe	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.079	-	0.002
LEAD °	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.002	≤ 0.2	0.002
MANGANESE °	mg/L Mn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.014	≤ 5.0	0.001
NICKEL °	mg/L Ni	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.003	≤ 1.0	0.001
SILVER °	mg/L Ag	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	-	0.005



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AC708-0004		
ZINC <sup>c</sup>	mg/L Zn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.028	≤ 5.0	0.001
<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

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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

\* : FLOW RATE CANNOT BE MEASURED.

ND : NON-DETECTABLE.

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

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 28, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : FEBRUARY 15, 2022  
**SAMPLING TIME** : 09:50 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS KALLAYA SOMPHONG

**RECEIVED DATE** : FEBRUARY 15, 2022  
**ANALYTICAL DATE** : FEBRUARY 15-24, 2022  
**REPORT NO.** : 2022-U014134  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AC708-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AC708-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	8.2 (28°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	2.0	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	236	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F° C)	2.93	-	0.04
<b>METALS</b>					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0013	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.009	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AC708-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.003	≤ 0.2	0.002
<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

FEBRUARY 28, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : FEBRUARY 22, 2022  
**SAMPLING TIME** : 14:30 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : FEBRUARY 23, 2022  
**ANALYTICAL DATE** : FEBRUARY 23-28, 2022  
**REPORT NO.** : 2022-U016192  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AD229-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT#2 T22AD229-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	8.0 (30°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,660 (30°C)	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	4.2	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	5.7	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	2,654	25
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F° C)	3.44	0.04
<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.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MARCH 8, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : FEBRUARY 22, 2022  
**SAMPLING TIME** : 14:30 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : FEBRUARY 23, 2022  
**ANALYTICAL DATE** : FEBRUARY 23-28, 2022  
**REPORT NO.** : 2022-U016192  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AD229-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT#2 T22AD229-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	8.0 (30°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,660 (30°C)	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	4.2	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	5.7	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	2,654	25
FLUORIDE °	mg/L F-	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F- C)	3.44	0.04
<b>SAMPLE CONDITION</b>				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
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

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

MARCH 8, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : FEBRUARY 22, 2022  
**SAMPLING TIME** : 14:22 HOUR  
**SAMPLING METHOD** <sup>c</sup> : GRAB  
**SAMPLING BY** <sup>c</sup> : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : FEBRUARY 23, 2022  
**ANALYTICAL DATE** : FEBRUARY 23-28, 2022  
**REPORT NO.** : 2022-U016195  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AD229-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AD229-0004		
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	8.0 (30°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY <sup>c</sup>	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,160 (30°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	5.3	≤ 20	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	≤ 50	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,084	≤ 3,000	25
FLUORIDE <sup>c</sup>	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	5.50	-	0.04
<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MARCH 8, 2022





## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED	<b>RECEIVED DATE</b>	: FEBRUARY 23, 2022
<b>ADDRESS</b>	: 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310	<b>ANALYTICAL DATE</b>	: FEBRUARY 23 - MARCH 4, 2022
<b>CONTACT INFORMATION</b>	: TEL : 0 2318 6788 e-mail : dusadee_kpy@hotmail.com	<b>REPORT NO.</b>	: 2022-U016196
<b>SAMPLING SOURCE</b>	: BOWIN	<b>WORK NO.</b>	: 2021-008810
<b>SAMPLE TYPE</b>	: EFFLUENT	<b>ANALYSIS NO.</b>	: T22AD229-0005
<b>SAMPLING DATE</b>	: FEBRUARY 22, 2022		
<b>SAMPLING TIME</b>	: 14:10 HOUR		
<b>SAMPLING METHOD °</b>	: GRAB		
<b>SAMPLING BY °</b>	: MR NAPASIT SRIPIM		
<b>ANALYZED BY</b>	: MISS AKSARIN BUNKONG		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AD229-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.9 (29°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	2.1	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	138	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	4.95	-	0.04
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0014	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.009	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AD229-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MARCH 8, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : MARCH 1, 2022  
**SAMPLING TIME** : 14:45 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR SETTHAWUT EMKLINBUA  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MARCH 2, 2022  
**ANALYTICAL DATE** : MARCH 2-8, 2022  
**REPORT NO.** : 2022-U018035  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AD833-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT #2 T22AD833-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	8.3 (31°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,650 (31°C)	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	4.7	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	6.6	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,432	25
FLUORIDE °	mg/L F	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	9.71	0.04
<b>SAMPLE CONDITION</b>				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
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

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

MARCH 14, 2022





## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MARCH 1, 2022  
**SAMPLING TIME** : 14:40 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR SETTHAWUT EMKLINBUA  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MARCH 2, 2022  
**ANALYTICAL DATE** : MARCH 2-8, 2022  
**REPORT NO.** : 2022-U018038  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AD833-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT #2 T22AD833-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.5 (31°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,450 (31°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	7.2	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	9.9	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,348	≤ 3,000	25
FLUORIDE °	mg/L F°	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F° C)	11.4	-	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MARCH 14, 2022



## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED	<b>RECEIVED DATE</b>	: MARCH 2, 2022
<b>ADDRESS</b>	: 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310	<b>ANALYTICAL DATE</b>	: MARCH 2-10, 2022
<b>CONTACT INFORMATION</b>	: TEL : 0 2318 6788 e-mail : dusadee_kpy@hotmail.com	<b>REPORT NO.</b>	: 2022-U018039
<b>SAMPLING SOURCE</b>	: BOWIN	<b>WORK NO.</b>	: 2021-008810
<b>SAMPLE TYPE</b>	: EFFLUENT	<b>ANALYSIS NO.</b>	: T22AD833-0005
<b>SAMPLING DATE</b>	: MARCH 1, 2022		
<b>SAMPLING TIME</b>	: 14:20 HOUR		
<b>SAMPLING METHOD °</b>	: GRAB		
<b>SAMPLING BY °</b>	: MR SETTHAWUT EMKLINBUA		
<b>ANALYZED BY</b>	: MISS AKSARIN BUNKONG		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AD833-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	8.3 (32°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	2.4	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> - E)	518	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F- C)	6.38	-	0.04
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0013	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.010	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AD833-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MARCH 14, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : MARCH 8, 2022  
**SAMPLING TIME** : 10:30 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MARCH 9, 2022  
**ANALYTICAL DATE** : MARCH 9-15, 2022  
**REPORT NO.** : 2022-U020335  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AE394-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT #2 T22AE394-0003	
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.5 (30°C)	-
ELECTRICAL CONDUCTIVITY <sup>c</sup>	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,512 (30°C)	0.1
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O <sub>2</sub> G AND 5210 B)	2.2	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	6.3	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	2,774	25
FLUORIDE <sup>c</sup>	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	6.98	0.04
<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.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MARCH 21, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MARCH 8, 2022  
**SAMPLING TIME** : 10:25 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MARCH 9, 2022  
**ANALYTICAL DATE** : MARCH 9-15, 2022  
**REPORT NO.** : 2022-U020337  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AE394-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT #2 T22AE394-0004		
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.7 (30°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY <sup>c</sup>	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,959 (30°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	3.7	≤ 20	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103- 105 °C (SM: 2540 D)	6.3	≤ 50	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,167	≤ 3,000	25
FLUORIDE <sup>c</sup>	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	7.10	-	0.04
<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MARCH 21, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MARCH 8, 2022  
**SAMPLING TIME** : 10:20 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AKSARIN BUNKONG

**RECEIVED DATE** : MARCH 9, 2022  
**ANALYTICAL DATE** : MARCH 9-17, 2022  
**REPORT NO.** : 2022-U020339  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AE394-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AE394-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	8.3 (29°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	2.2	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> : E)	428	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	6.50	-	0.04
<b>METALS</b>					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0007	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.010	-	0.001





PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AE394-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<b>SAMPLE CONDITION</b>					
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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MARCH 21, 2022

## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED	<b>RECEIVED DATE</b>	: MARCH 15, 2022
<b>ADDRESS</b>	: 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310	<b>ANALYTICAL DATE</b>	: MARCH 15-23, 2022
<b>CONTACT INFORMATION</b>	: TEL : 0 2318 6788 e-mail : dusadee_kpy@hotmail.com	<b>REPORT NO.</b>	: 2022-U022431
<b>SAMPLING SOURCE</b>	: BOWIN	<b>WORK NO.</b>	: 2021-008810
<b>SAMPLE TYPE</b>	: WASTEWATER	<b>ANALYSIS NO.</b>	: T22AE927-0003
<b>SAMPLING DATE</b>	: MARCH 15, 2022		
<b>SAMPLING TIME</b>	: 09:40 HOUR		
<b>SAMPLING METHOD °</b>	: GRAB		
<b>SAMPLING BY °</b>	: MR NAPASIT SRIPIM		
<b>ANALYZED BY</b>	: MISS AMONRAT PUTTALEE		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT#2 T22AE927-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	6.5 (32°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,610 (32°C)	0.1
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	32	-
DISSOLVED OXYGEN °	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	4.1	0.5
FLOW RATE °	m³/s	CURRENT METER AND CALCULATION	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	3.6	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	9.3	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,336	25
CHLORIDE °	mg/L Cl⁻	ARGENTOMETRIC METHOD (SM: 4500-Cl⁻ B)	217	2.0
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S²⁻ F)	ND	0.50
FLUORIDE °	mg/L F⁻	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F⁻ C)	5.29	0.04
TOTAL KJELDAHL NITROGEN °	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	ND	1.5
FAT, OIL AND GREASE °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D)	3	3
CYANIDE °	mg/L CN⁻	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN⁻ C AND 4500-CN⁻ E)	0.077	0.005
PHENOLS °	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 D)	ND	0.1
FORMALDEHYDE °	mg/L	DISTILLATION AND COLOURIMETRIC METHOD	ND	0.05
RESIDUAL FREE CHLORINE °	mg/L Cl₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	0.1
<b>METALS</b>				
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0008	0.0003
MERCURY °	mg/L Hg	COLD VAPOUR AAS METHOD (SM: 3112 B)	ND	0.0005
HEXAVALENT CHROMIUM °	mg/L Cr⁶⁺	COLOURIMETRIC METHOD (SM: 3500-Cr B)	ND	0.006
ALUMINUM °	mg/L Al	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	1.12	0.010



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT#2 T22AE927-0003	
CADMIUM <sup>c</sup>	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.001
COPPER <sup>c</sup>	mg/L Cu	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.004	0.001
IRON <sup>c</sup>	mg/L Fe	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.042	0.002
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.002
MANGANESE <sup>c</sup>	mg/L Mn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.011	0.001
NICKEL <sup>c</sup>	mg/L Ni	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.001	0.001
SILVER <sup>c</sup>	mg/L Ag	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.005
ZINC <sup>c</sup>	mg/L Zn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.019	0.001
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/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

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.

\* : FLOW RATE CANNOT BE MEASURED.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MARCH 28, 2022



## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED	<b>RECEIVED DATE</b>	: MARCH 15, 2022
<b>ADDRESS</b>	: 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310	<b>ANALYTICAL DATE</b>	: MARCH 15-23, 2022
<b>CONTACT INFORMATION</b>	: TEL : 0 2318 6788 e-mail : dusadee_kpy@hotmail.com	<b>REPORT NO.</b>	: 2022-U022432
<b>SAMPLING SOURCE</b>	: BOWIN	<b>WORK NO.</b>	: 2021-008810
<b>SAMPLE TYPE</b>	: EFFLUENT	<b>ANALYSIS NO.</b>	: T22AE927-0004
<b>SAMPLING DATE</b>	: MARCH 15, 2022		
<b>SAMPLING TIME</b>	: 09:30 HOUR		
<b>SAMPLING METHOD °</b>	: GRAB		
<b>SAMPLING BY °</b>	: MR NAPASIT SRIPIM		
<b>ANALYZED BY</b>	: MISS AMONRAT PUTTALEE		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AE927-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.2 (31°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,328 (31°C)	-	0.1
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	31	≤ 40	-
DISSOLVED OXYGEN °	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	3.8	-	0.5
FLOW RATE °	m³/s	CURRENT METER AND CALCULATION	-	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	3.5	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,470	≤ 3,000	25
CHLORIDE °	mg/L Cl <sup>-</sup>	ARGENTOMETRIC METHOD (SM: 4500-Cl <sup>-</sup> B)	186	-	2.0
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S <sup>2-</sup> F)	ND	≤ 1	0.50
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	4.37	-	0.04
TOTAL KJELDAHL NITROGEN °	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	ND	≤ 100	1.5
FAT, OIL AND GREASE °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D)	4	≤ 5	3
CYANIDE °	mg/L CN <sup>-</sup>	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN <sup>-</sup> C AND 4500 -CN <sup>-</sup> E)	0.049	≤ 0.2	0.005
PHENOLS °	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 D)	ND	≤ 1	0.1
FORMALDEHYDE °	mg/L	DISTILLATION AND COLOURIMETRIC METHOD	ND	≤ 1	0.05
RESIDUAL FREE CHLORINE °	mg/L Cl <sub>2</sub>	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	0.1	≤ 1	0.1



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AE927-0004		
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0008	≤ 0.25	0.0003
MERCURY °	mg/L Hg	COLD VAPOUR AAS METHOD (SM: 3112 B)	ND	≤ 0.005	0.0005
HEXAVALENT CHROMIUM °	mg/L Cr <sup>6+</sup>	COLOURIMETRIC METHOD (SM: 3500-Cr B)	ND	≤ 0.25	0.006
ALUMINUM °	mg/L Al	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.604	-	0.010
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
COPPER °	mg/L Cu	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.005	≤ 2.0	0.001
IRON °	mg/L Fe	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.044	-	0.002
LEAD °	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
MANGANESE °	mg/L Mn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.010	≤ 5.0	0.001
NICKEL °	mg/L Ni	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.001	≤ 1.0	0.001
SILVER °	mg/L Ag	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	-	0.005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AE927-0004		
ZINC <sup>c</sup>	mg/L Zn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.018	≤ 5.0	0.001
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/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

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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

\* : FLOW RATE CANNOT BE MEASURED.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MARCH 28, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MARCH 15, 2022  
**SAMPLING TIME** : 09:15 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS KALLAYA SOMPHONG

**RECEIVED DATE** : MARCH 15, 2022  
**ANALYTICAL DATE** : MARCH 15-23, 2022  
**REPORT NO.** : 2022-U022433  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AE927-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AE927-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	8.8 (31°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	2.3	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	363	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	5.89	-	0.04
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0011	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.010	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AE927-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<b>SAMPLE CONDITION</b>					
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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MARCH 28, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : MARCH 22, 2022  
**SAMPLING TIME** : 11:10 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MARCH 22, 2022  
**ANALYTICAL DATE** : MARCH 22-28, 2022  
**REPORT NO.** : 2022-U024511  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AF514-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT#2 T22AF514-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.5 (31°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,053 (31°C)	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O <sub>2</sub> G AND 5210 B)	ND	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	5.5	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	1,728	25
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	6.29	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN	

° : 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

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 4, 2022





## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MARCH 22, 2022  
**SAMPLING TIME** : 11:00 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MARCH 22, 2022  
**ANALYTICAL DATE** : MARCH 22-28, 2022  
**REPORT NO.** : 2022-U024512  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AF514-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AF514-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.9 (31°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,809 (32°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103- 105 °C (SM: 2540 D)	8.8	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,709	≤ 3,000	25
FLUORIDE °	mg/L F°	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F° C)	6.49	-	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR BROWN		

° : 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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 4, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MARCH 22, 2022  
**SAMPLING TIME** : 10:45 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AKSARIN BUNKONG

**RECEIVED DATE** : MARCH 22, 2022  
**ANALYTICAL DATE** : MARCH 22-30, 2022  
**REPORT NO.** : 2022-U024513  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AF514-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AF514-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	8.9 (31°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	280	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	6.06	-	0.04
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0009	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.012	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AF514-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 4, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : MARCH 29, 2022  
**SAMPLING TIME** : 10:46 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR KITIPONG SONCHAIYAPHUM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MARCH 30, 2022  
**ANALYTICAL DATE** : MARCH 30-APRIL 4, 2022  
**REPORT NO.** : 2022-U025653  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AG037-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT #2 T22AG037-0003	
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.9 (32°C)	-
ELECTRICAL CONDUCTIVITY <sup>c</sup>	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,980 (32°C)	0.1
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O <sub>2</sub> G AND 5210 B)	3.0	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	20.2	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	2,729	25
FLUORIDE <sup>c</sup>	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	4.56	0.04
<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.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 8, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MARCH 29, 2022  
**SAMPLING TIME** : 10:54 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR KITIPONG SONCHAIYAPHUM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MARCH 30, 2022  
**ANALYTICAL DATE** : MARCH 30-APRIL 4, 2022  
**REPORT NO.** : 2022-U025654  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AG037-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT #2 T22AG037-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.6 (32°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,300 (32°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103- 105 °C (SM: 2540 D)	ND	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	1,891	≤ 3,000	25
FLUORIDE °	mg/L F	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F° C)	3.65	-	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 8, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MARCH 29, 2022  
**SAMPLING TIME** : 10:40 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR KITIPONG SONCHAIYAPHUM  
**ANALYZED BY** : MISS AKSARIN BUNKONG

**RECEIVED DATE** : MARCH 30, 2022  
**ANALYTICAL DATE** : MARCH 30-APRIL 5, 2022  
**REPORT NO.** : 2022-U025655  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AG037-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AG037-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	8.9 (32°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	496	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	5.61	-	0.04
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0014	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.016	-	0.001





PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AG037-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 8, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : APRIL 5, 2022  
**SAMPLING TIME** : 10:15 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE  
**RECEIVED DATE** : APRIL 5, 2022  
**ANALYTICAL DATE** : APRIL 5-11, 2022  
**REPORT NO.** : 2022-U028613  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AG495-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT T22AG495-0003	
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	6.7 (30°C)	-
ELECTRICAL CONDUCTIVITY <sup>c</sup>	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,857 (29°C)	0.1
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O <sub>2</sub> G AND 5210 B)	4.2	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	10.2	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	2,907	25
FLUORIDE <sup>c</sup>	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	4.69	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/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.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 21, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : APRIL 5, 2022  
**SAMPLING TIME** : 10:10 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : APRIL 5, 2022  
**ANALYTICAL DATE** : APRIL 5-11, 2022  
**REPORT NO.** : 2022-U028614  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AG495-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT T22AG495-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.0 (29°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,990 (29°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	2.8	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	12.5	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,330	≤ 3,000	25
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F° C)	4.94	-	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR 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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 21, 2022





## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED	<b>RECEIVED DATE</b>	: APRIL 5, 2022
<b>ADDRESS</b>	: 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310	<b>ANALYTICAL DATE</b>	: APRIL 5-18, 2022
<b>CONTACT INFORMATION</b>	: TEL : 0 2318 6788 e-mail : dusadee_kpy@hotmail.com	<b>REPORT NO.</b>	: 2022-U028615
<b>SAMPLING SOURCE</b>	: BOWIN	<b>WORK NO.</b>	: 2021-008810
<b>SAMPLE TYPE</b>	: EFFLUENT	<b>ANALYSIS NO.</b>	: T22AG495-0005
<b>SAMPLING DATE</b>	: APRIL 5, 2022		
<b>SAMPLING TIME</b>	: 10:00 HOUR		
<b>SAMPLING METHOD °</b>	: GRAB		
<b>SAMPLING BY °</b>	: MR THANADET WANSANOR		
<b>ANALYZED BY</b>	: MISS AKSARIN BUNKONG		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AG495-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	8.5 (27°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	3.8	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	1,068	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	5.54	-	0.04
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0016	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.013	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AG495-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 21, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : APRIL 12, 2022  
**SAMPLING TIME** : 11:50 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : APRIL 12, 2022  
**ANALYTICAL DATE** : APRIL 12-25, 2022  
**REPORT NO.** : 2022-U030409  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AH077-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT T22AH077-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.7 (32°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	1,982 (32°C)	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	2.6	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	6.0	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	1,935	25
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	4.34	0.04
<b>SAMPLE CONDITION</b>				
WATER'S COLOUR/TURBID			COLOURLESS/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

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 27, 2022





## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : APRIL 12, 2022  
**SAMPLING TIME** : 11:45 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : APRIL 12, 2022  
**ANALYTICAL DATE** : APRIL 12-25, 2022  
**REPORT NO.** : 2022-U030410  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AH077-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT T22AH077-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H* B)	8.1 (32°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,060 (32°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	2.4	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	5.3	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,192	≤ 3,000	25
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	5.09	-	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR GREEN		

° : 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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 27, 2022



## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED	<b>RECEIVED DATE</b>	: APRIL 12, 2022
<b>ADDRESS</b>	: 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310	<b>ANALYTICAL DATE</b>	: APRIL 12-22, 2022
<b>CONTACT INFORMATION</b>	: TEL : 0 2318 6788 e-mail : dusadee_kpy@hotmail.com	<b>REPORT NO.</b>	: 2022-U030412
<b>SAMPLING SOURCE</b>	: BOWIN	<b>WORK NO.</b>	: 2021-008810
<b>SAMPLE TYPE</b>	: EFFLUENT	<b>ANALYSIS NO.</b>	: T22AH077-0005
<b>SAMPLING DATE</b>	: APRIL 12, 2022		
<b>SAMPLING TIME</b>	: 11:35 HOUR		
<b>SAMPLING METHOD °</b>	: GRAB		
<b>SAMPLING BY °</b>	: MR NAPASIT SRIPIM		
<b>ANALYZED BY</b>	: MISS AKSARIN BUNKONG		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AH077-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	9.4 (32°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O <sub>2</sub> G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	350	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	6.23	-	0.04
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0020	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.012	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AH077-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID 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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 27, 2022



## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED	<b>RECEIVED DATE</b>	: APRIL 19, 2022
<b>ADDRESS</b>	: 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310	<b>ANALYTICAL DATE</b>	: APRIL 19-28, 2022
<b>CONTACT INFORMATION</b>	: TEL : 0 2318 6788 e-mail : dusadee_kpy@hotmail.com	<b>REPORT NO.</b>	: 2022-U031232
<b>SAMPLING SOURCE</b>	: BOWIN	<b>WORK NO.</b>	: 2021-008810
<b>SAMPLE TYPE</b>	: WASTEWATER	<b>ANALYSIS NO.</b>	: T22AH301-0003
<b>SAMPLING DATE</b>	: APRIL 19, 2022		
<b>SAMPLING TIME</b>	: 10:50 HOUR		
<b>SAMPLING METHOD °</b>	: GRAB		
<b>SAMPLING BY °</b>	: MR THANADET WANSANOR		
<b>ANALYZED BY</b>	: MISS AMONRAT PUTTALEE		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT#2 T22AH301-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	6.0 (32°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,534 (32°C)	0.1
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	32	-
DISSOLVED OXYGEN °	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	6.0	0.5
FLOW RATE* °	m³/s	CURRENT METER AND CALCULATION	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	8.7	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	2,171	25
CHLORIDE °	mg/L Cl⁻	ARGENTOMETRIC METHOD (SM: 4500-Cl⁻ B)	243	2.0
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S² F)	ND	0.50
FLUORIDE °	mg/L F⁻	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F⁻ C)	7.76	0.04
TOTAL KJELDAHL NITROGEN °	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	5.9	1.5
FAT, OIL AND GREASE °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D)	ND	3
CYANIDE °	mg/L CN⁻	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN⁻ C AND 4500-CN⁻ E)	0.117	0.005
PHENOLS °	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 D)	ND	0.1
FORMALDEHYDE °	mg/L	DISTILLATION AND COLOURIMETRIC METHOD	ND	0.05
RESIDUAL FREE CHLORINE °	mg/L Cl₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	0.1
<b>METALS</b>				
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0021	0.0003
MERCURY °	mg/L Hg	COLD VAPOUR AAS METHOD (SM: 3112 B)	ND	0.0005
HEXAVALENT CHROMIUM °	mg/L Cr⁶⁺	COLOURIMETRIC METHOD (SM: 3500-Cr B)	ND	0.006
ALUMINUM °	mg/L Al	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	2.73	0.010



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT#2 T22AH301-0003	
CADMIUM <sup>c</sup>	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.001
COPPER <sup>c</sup>	mg/L Cu	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.005	0.001
IRON <sup>c</sup>	mg/L Fe	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.063	0.002
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.002
MANGANESE <sup>c</sup>	mg/L Mn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.021	0.001
NICKEL <sup>c</sup>	mg/L Ni	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.002	0.001
SILVER <sup>c</sup>	mg/L Ag	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.005
ZINC <sup>c</sup>	mg/L Zn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.016	0.001
<b>SAMPLE CONDITION</b>				
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.

\* : FLOW RATE CANNOT BE MEASURED.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 29, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : APRIL 19, 2022  
**SAMPLING TIME** : 10:35 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : APRIL 19, 2022  
**ANALYTICAL DATE** : APRIL 19-28, 2022  
**REPORT NO.** : 2022-U031233  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AH301-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AH301-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	6.0 (31°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,120 (31°C)	-	0.1
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	31	≤ 40	-
DISSOLVED OXYGEN °	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	5.8	-	0.5
FLOW RATE* °	m³/s	CURRENT METER AND CALCULATION	-	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	8.9	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	2,878	≤ 3,000	25
CHLORIDE °	mg/L Cl⁻	ARGENTOMETRIC METHOD (SM: 4500-Cl⁻ B)	316	-	2.0
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S²⁻ F)	ND	≤ 1	0.50
FLUORIDE °	mg/L F⁻	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	8.24	-	0.04
TOTAL KJELDAHL NITROGEN °	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	< LOQ	≤ 100	1.5
FAT, OIL AND GREASE °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D)	ND	≤ 5	3
CYANIDE °	mg/L CN⁻	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN⁻ C AND 4500 -CN⁻ E)	0.172	≤ 0.2	0.005
PHENOLS °	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 D)	ND	≤ 1	0.1
FORMALDEHYDE °	mg/L	DISTILLATION AND COLOURIMETRIC METHOD	ND	≤ 1	0.05
RESIDUAL FREE CHLORINE °	mg/L Cl₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	0.1	≤ 1	0.1





PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AH301-0004		
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0013	≤ 0.25	0.0003
MERCURY °	mg/L Hg	COLD VAPOUR AAS METHOD (SM: 3112 B)	ND	≤ 0.005	0.0005
HEXAVALENT CHROMIUM °	mg/L Cr <sup>6+</sup>	COLOURIMETRIC METHOD (SM: 3500-Cr B)	ND	≤ 0.25	0.006
ALUMINUM °	mg/L Al	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	1.40	-	0.010
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
COPPER °	mg/L Cu	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.006	≤ 2.0	0.001
IRON °	mg/L Fe	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.093	-	0.002
LEAD °	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
MANGANESE °	mg/L Mn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.019	≤ 5.0	0.001
NICKEL °	mg/L Ni	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.004	≤ 1.0	0.001
SILVER °	mg/L Ag	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	-	0.005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AH301-0004		
ZINC <sup>c</sup>	mg/L Zn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.029	≤ 5.0	0.001
<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

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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

\* : FLOW RATE CANNOT BE MEASURED.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 29, 2022

## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED	<b>RECEIVED DATE</b>	: APRIL 19, 2022
<b>ADDRESS</b>	: 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310	<b>ANALYTICAL DATE</b>	: APRIL 19-27, 2022
<b>CONTACT INFORMATION</b>	: TEL : 0 2318 6788 e-mail : dusadee_kpy@hotmail.com	<b>REPORT NO.</b>	: 2022-U031234
<b>SAMPLING SOURCE</b>	: BOWIN	<b>WORK NO.</b>	: 2021-008810
<b>SAMPLE TYPE</b>	: EFFLUENT	<b>ANALYSIS NO.</b>	: T22AH301-0005
<b>SAMPLING DATE</b>	: APRIL 19, 2022		
<b>SAMPLING TIME</b>	: 10:20 HOUR		
<b>SAMPLING METHOD °</b>	: GRAB		
<b>SAMPLING BY °</b>	: MR THANADET WANSANOR		
<b>ANALYZED BY</b>	: MISS KALLAYA SOMPHONG		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AH301-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	9.3 (30°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	211	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F° C)	7.00	-	0.04
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0012	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.013	-	0.001





PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AH301-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

APRIL 29, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : APRIL 26, 2022  
**SAMPLING TIME** : 11:10 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : APRIL 26, 2022  
**ANALYTICAL DATE** : APRIL 26 - MAY 2, 2022  
**REPORT NO.** : 2022-U033453  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AH823-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT#2 T22AH823-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	6.7 (33°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,353 (34°C)	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	2,881	25
FLUORIDE °	mg/L F-	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	6.04	0.04
<b>SAMPLE CONDITION</b>				
WATER'S COLOUR/TURBID			COLOURLESS/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

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

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHAI)  
LABORATORY SUPERVISOR

MAY 10, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : APRIL 26, 2022  
**SAMPLING TIME** : 11:05 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : APRIL 26, 2022  
**ANALYTICAL DATE** : APRIL 26 - MAY 2, 2022  
**REPORT NO.** : 2022-U033454  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AH823-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AH823-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	6.6 (33°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,795 (33°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	6.0	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,183	≤ 3,000	25
FLUORIDE °	mg/L F-	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F- C)	6.64	-	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR 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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHAI)  
LABORATORY SUPERVISOR

MAY 10, 2022





## ANALYSIS REPORT

<b>CUSTOMER NAME</b>	: ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED	<b>RECEIVED DATE</b>	: APRIL 26, 2022
<b>ADDRESS</b>	: 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310	<b>ANALYTICAL DATE</b>	: APRIL 26 - MAY 3, 2022
<b>CONTACT INFORMATION</b>	: TEL : 0 2318 6788 e-mail : dusadee_kpy@hotmail.com	<b>REPORT NO.</b>	: 2022-U033455
<b>SAMPLING SOURCE</b>	: BOWIN	<b>WORK NO.</b>	: 2021-008810
<b>SAMPLE TYPE</b>	: EFFLUENT	<b>ANALYSIS NO.</b>	: T22AH823-0005
<b>SAMPLING DATE</b>	: APRIL 26, 2022		
<b>SAMPLING TIME</b>	: 10:47 HOUR		
<b>SAMPLING METHOD °</b>	: GRAB		
<b>SAMPLING BY °</b>	: MR THANADET WANSANOR		
<b>ANALYZED BY</b>	: MISS KALLAYA SOMPHONG		

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AH823-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	9.3 (32°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F° C)	6.78	-	0.04
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> ° E)	598	-	0.09
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0012	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.015	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AH823-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR WHITE		

<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHAI)  
LABORATORY SUPERVISOR

MAY 10, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : MAY 5, 2022  
**SAMPLING TIME** : 13:48 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MAY 6, 2022  
**ANALYTICAL DATE** : MAY 6-13, 2022  
**REPORT NO.** : 2022-U035730  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AI407-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT#2 T22AI407-0003	
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.0 (31°C)	-
ELECTRICAL CONDUCTIVITY <sup>c</sup>	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	4,209 (30°C)	0.1
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O <sub>2</sub> G AND 5210 B)	ND	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,307	25
FLUORIDE <sup>c</sup>	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	4.15	0.04
<b>SAMPLE CONDITION</b>				
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

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 19, 2022





## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MAY 5, 2022  
**SAMPLING TIME** : 13:41 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MAY 6, 2022  
**ANALYTICAL DATE** : MAY 6-13, 2022  
**REPORT NO.** : 2022-U035732  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AI407-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AI407-0004		
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.5 (31°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY <sup>c</sup>	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,966 (31°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103- 105 °C (SM: 2540 D)	ND	≤ 50	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,456	≤ 3,000	25
FLUORIDE <sup>c</sup>	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	4.59	-	0.04
<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.



(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MAY 19, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MAY 5, 2022  
**SAMPLING TIME** : 13:33 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AKSARIN BUNKONG

**RECEIVED DATE** : MAY 6, 2022  
**ANALYTICAL DATE** : MAY 6-12, 2022  
**REPORT NO.** : 2022-U035733  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AI407-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AI407-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	8.4 (30°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	297	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	5.84	-	0.04
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0014	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.014	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AI407-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<b>SAMPLE CONDITION</b>					
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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MAY 19, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : MAY 10, 2022  
**SAMPLING TIME** : 15:41 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MAY 11, 2022  
**ANALYTICAL DATE** : MAY 11-16, 2022  
**REPORT NO.** : 2022-U037735  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AI784-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT WWT#2 T22AI784-0003	
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.7 (31°C)	-
ELECTRICAL CONDUCTIVITY <sup>c</sup>	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	4,006 (31°C)	0.1
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O <sub>2</sub> G AND 5210 B)	3.2	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	5.8	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	4,381	25
FLUORIDE <sup>c</sup>	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	6.07	0.04
<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.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MAY 24, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MAY 10, 2022  
**SAMPLING TIME** : 15:36 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MAY 11, 2022  
**ANALYTICAL DATE** : MAY 11-16, 2022  
**REPORT NO.** : 2022-U037736  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AI784-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT WWT#2 T22AI784-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.3 (31°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,508 (31°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103- 105 °C (SM: 2540 D)	ND	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,692	≤ 3,000	25
FLUORIDE °	mg/L F	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	5.08	-	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR GREEN		

° : 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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MAY 24, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MAY 10, 2022  
**SAMPLING TIME** : 15:30 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AKSARIN BUNKONG

**RECEIVED DATE** : MAY 11, 2022  
**ANALYTICAL DATE** : MAY 11-18, 2022  
**REPORT NO.** : 2022-U037737  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AI784-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AI784-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	8.1 (31°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	245	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	5.25	-	0.04
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0011	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.014	-	0.001





PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AI784-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MAY 24, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : MAY 17, 2022  
**SAMPLING TIME** : 13:15 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MAY 18, 2022  
**ANALYTICAL DATE** : MAY 18-27, 2022  
**REPORT NO.** : 2022-U039914  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AJ299-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT T22AJ299-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	6.9 (32°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,420 (32°C)	0.1
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	32	-
DISSOLVED OXYGEN °	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	3.8	0.5
FLOW RATE* °	m³/s	CURRENT METER AND CALCULATION	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	5.5	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,576	25
CHLORIDE °	mg/L Cl⁻	ARGENTOMETRIC METHOD (SM: 4500-Cl⁻ B)	284	2.0
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S²⁻ F)	ND	0.50
FLUORIDE °	mg/L F⁻	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F⁻ C)	5.58	0.04
TOTAL KJELDAHL NITROGEN °	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	11.3	1.5
FAT, OIL AND GREASE °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D)	ND	3
CYANIDE °	mg/L CN⁻	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN⁻ C AND 4500-CN⁻ E)	0.104	0.005
PHENOLS °	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 D)	ND	0.1
FORMALDEHYDE °	mg/L	DISTILLATION AND COLOURIMETRIC METHOD	ND	0.05
RESIDUAL FREE CHLORINE °	mg/L Cl₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	0.1
<b>METALS</b>				
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0017	0.0003
MERCURY °	mg/L Hg	COLD VAPOUR AAS METHOD (SM: 3112 B)	ND	0.0005
HEXAVALENT CHROMIUM °	mg/L Cr⁶⁺	COLOURIMETRIC METHOD (SM: 3500-Cr B)	ND	0.006
ALUMINUM °	mg/L Al	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	1.09	0.010



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT T22AJ299-0003	
CADMIUM <sup>c</sup>	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.001
COPPER <sup>c</sup>	mg/L Cu	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.004	0.001
IRON <sup>c</sup>	mg/L Fe	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.064	0.002
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.002	0.002
MANGANESE <sup>c</sup>	mg/L Mn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.018	0.001
NICKEL <sup>c</sup>	mg/L Ni	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.002	0.001
SILVER <sup>c</sup>	mg/L Ag	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.005
ZINC <sup>c</sup>	mg/L Zn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.025	0.001
<b>SAMPLE CONDITION</b>				
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.

\* : FLOW RATE CANNOT BE MEASURED.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MAY 30, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MAY 17, 2022  
**SAMPLING TIME** : 13:05 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MAY 18, 2022  
**ANALYTICAL DATE** : MAY 18-27, 2022  
**REPORT NO.** : 2022-U039915  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AJ299-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT T22AJ299-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.2 (32°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,700 (32°C)	-	0.1
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	32	≤ 40	-
DISSOLVED OXYGEN °	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	4.8	-	0.5
FLOW RATE* °	m³/s	CURRENT METER AND CALCULATION	-	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	10.1	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,984	≤ 3,000	25
CHLORIDE °	mg/L Cl⁻	ARGENTOMETRIC METHOD (SM: 4500-Cl⁻ B)	297	-	2.0
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S²⁻ F)	ND	≤ 1	0.50
FLUORIDE °	mg/L F⁻	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F⁻ C)	6.05	-	0.04
TOTAL KJELDAHL NITROGEN °	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	11.1	≤ 100	1.5
FAT, OIL AND GREASE °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D)	ND	≤ 5	3
CYANIDE °	mg/L CN⁻	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN⁻ C AND 4500-CN⁻ E)	0.116	≤ 0.2	0.005
PHENOLS °	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 D)	ND	≤ 1	0.1
FORMALDEHYDE °	mg/L	DISTILLATION AND COLOURIMETRIC METHOD	ND	≤ 1	0.05
RESIDUAL FREE CHLORINE °	mg/L Cl₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	≤ 1	0.1



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT T22AJ299-0004		
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0015	≤ 0.25	0.0003
MERCURY °	mg/L Hg	COLD VAPOUR AAS METHOD (SM: 3112 B)	ND	≤ 0.005	0.0005
HEXAVALENT CHROMIUM °	mg/L Cr <sup>6+</sup>	COLOURIMETRIC METHOD (SM: 3500-Cr B)	ND	≤ 0.25	0.006
ALUMINUM °	mg/L Al	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	1.66	-	0.010
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
COPPER °	mg/L Cu	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.005	≤ 2.0	0.001
IRON °	mg/L Fe	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.101	-	0.002
LEAD °	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
MANGANESE °	mg/L Mn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.019	≤ 5.0	0.001
NICKEL °	mg/L Ni	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.002	≤ 1.0	0.001
SILVER °	mg/L Ag	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 1.0	0.005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT T22AJ299-0004		
ZINC <sup>c</sup>	mg/L Zn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.023	≤ 5.0	0.001
<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

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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

\* : FLOW RATE CANNOT BE MEASURED.

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MAY 30, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MAY 17, 2022  
**SAMPLING TIME** : 13:00 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS KALLAYA SOMPHONG

**RECEIVED DATE** : MAY 18, 2022  
**ANALYTICAL DATE** : MAY 18-24, 2022  
**REPORT NO.** : 2022-U039918  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AJ299-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AJ299-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	8.1 (32°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	200	-	0.09
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F° C)	6.95	-	0.04
<b>METALS</b>					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0014	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.014	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AJ299-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.002	≤ 0.2	0.002
<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Piyapat S.*

(MRS PIYAPAT SUTTAMANUTWONG)  
LABORATORY SUPERVISOR

MAY 30, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : MAY 24, 2022  
**SAMPLING TIME** : 10:10 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MAY 24, 2022  
**ANALYTICAL DATE** : MAY 24-30, 2022  
**REPORT NO.** : 2022-U041427  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AJ846-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT T22AJ846-0003	
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	6.8 (32°C)	-
ELECTRICAL CONDUCTIVITY <sup>c</sup>	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	1,866 (32°C)	0.1
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O <sub>2</sub> G AND 5210 B)	2.3	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	10.6	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	1,920	25
FLUORIDE <sup>c</sup>	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	4.19	0.04
<b>SAMPLE CONDITION</b>				
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

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

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHAI)  
LABORATORY SUPERVISOR

JUNE 2, 2022





## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MAY 24, 2022  
**SAMPLING TIME** : 10:00 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MAY 24, 2022  
**ANALYTICAL DATE** : MAY 24-30, 2022  
**REPORT NO.** : 2022-U041428  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AJ846-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT T22AJ846-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	5.9 (32°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,772 (32°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	11.1	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,260	≤ 3,000	25
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F- C)	5.09	-	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHA)  
LABORATORY SUPERVISOR

JUNE 2, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MAY 24, 2022  
**SAMPLING TIME** : 09:30 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR THANADET WANSANOR  
**ANALYZED BY** : MISS KALLAYA SOMPHONG

**RECEIVED DATE** : MAY 24, 2022  
**ANALYTICAL DATE** : MAY 24-30, 2022  
**REPORT NO.** : 2022-U041429  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AJ846-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AJ846-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	8.0 (31°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
FLUORIDE °	mg/L F	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	5.72	-	0.04
NITRATE °	mg/L NO <sub>3</sub>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> E)	329	-	0.09
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0015	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.013	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AJ846-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<b>SAMPLE CONDITION</b>					
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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHAI)  
LABORATORY SUPERVISOR

JUNE 2, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : MAY 30, 2022  
**SAMPLING TIME** : 13:37 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR KITIPONG SONCHAIYAPHUM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MAY 31, 2022  
**ANALYTICAL DATE** : MAY 31 - JUNE 5, 2022  
**REPORT NO.** : 2022-U043405  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AK266-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT T22AK266-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	6.4 (33°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,570 (33°C)	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	19.8	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,720	25
FLUORIDE °	mg/L F°	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F° C)	4.47	0.04
<b>SAMPLE CONDITION</b>				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
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

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

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHAI)  
LABORATORY SUPERVISOR

JUNE 10, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MAY 30, 2022  
**SAMPLING TIME** : 13:31 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR KITIPONG SONCHAIYAPHUM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : MAY 31, 2022  
**ANALYTICAL DATE** : MAY 31 - JUNE 5, 2022  
**REPORT NO.** : 2022-U043406  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AK266-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT T22AK266-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	6.5 (33°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,540 (33°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	12.7	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,330	≤ 3,000	25
FLUORIDE °	mg/L F	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	7.07	-	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHAI)  
LABORATORY SUPERVISOR

JUNE 10, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : MAY 30, 2022  
**SAMPLING TIME** : 13:22 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR KITIPONG SONCHAIYAPHUM  
**ANALYZED BY** : MISS KALLAYA SOMPHONG

**RECEIVED DATE** : MAY 31, 2022  
**ANALYTICAL DATE** : MAY 31 - JUNE 8, 2022  
**REPORT NO.** : 2022-U043407  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AK266-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AK266-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	8.0 (34°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	7.69	-	0.04
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	140	-	0.09
<b>METALS</b>					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0012	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.014	-	0.001





PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AK266-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/CLEAR WHITE		

<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHAI)  
LABORATORY SUPERVISOR

JUNE 10, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : JUNE 7, 2022  
**SAMPLING TIME** : 11:25 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR KITIPONG SONCHAIYAPHUM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JUNE 8, 2022  
**ANALYTICAL DATE** : JUNE 8-15, 2022  
**REPORT NO.** : 2022-U046447  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AK965-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT T22AK965-0003	
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	6.6 (33°C)	-
ELECTRICAL CONDUCTIVITY <sup>c</sup>	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,840 (32°C)	0.1
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O <sub>2</sub> G AND 5210 B)	ND	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	8.5	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	4,150	25
FLUORIDE <sup>c</sup>	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	5.59	0.04
<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.

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHAI)  
LABORATORY SUPERVISOR

JUNE 21, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JUNE 7, 2022  
**SAMPLING TIME** : 11:19 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR KITIPONG SONCHAIYAPHUM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JUNE 8, 2022  
**ANALYTICAL DATE** : JUNE 8-15, 2022  
**REPORT NO.** : 2022-U046448  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AK965-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT T22AK965-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	6.7 (32°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,760 (32°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	4,232	≤ 3,000	25
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	7.64	-	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHAI)  
LABORATORY SUPERVISOR

JUNE 21, 2022





## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JUNE 7, 2022  
**SAMPLING TIME** : 11:11 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR KITIPONG SONCHAIYAPHUM  
**ANALYZED BY** : MISS KALLAYA SOMPHONG

**RECEIVED DATE** : JUNE 8, 2022  
**ANALYTICAL DATE** : JUNE 8-16, 2022  
**REPORT NO.** : 2022-U046449  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AK965-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AK965-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	8.0 (33°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F- C)	6.65	-	0.04
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> - E)	828	-	0.09
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0010	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.010	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AK965-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHAI)  
LABORATORY SUPERVISOR

JUNE 21, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : JUNE 14, 2022  
**SAMPLING TIME** : 11:20 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JUNE 14, 2022  
**ANALYTICAL DATE** : JUNE 14-20, 2022  
**REPORT NO.** : 2022-U048016  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AL487-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT T22AL487-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.8 (33°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	2,340 (33°C)	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	ND	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	2,134	25
FLUORIDE °	mg/L F	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F° C)	3.65	0.04
<b>SAMPLE CONDITION</b>				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
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

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

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHA)  
LABORATORY SUPERVISOR

JUNE 24, 2022





## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JUNE 14, 2022  
**SAMPLING TIME** : 11:15 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JUNE 14, 2022  
**ANALYTICAL DATE** : JUNE 14-20, 2022  
**REPORT NO.** : 2022-U048017  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AL487-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT T22AL487-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	7.8 (33°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	4,580 (32°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	7.4	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	4,938	≤ 3,000	25
FLUORIDE °	mg/L F-	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	6.07	-	0.04
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			YELLOW/CLEAR 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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHA)  
LABORATORY SUPERVISOR

JUNE 24, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JUNE 14, 2022  
**SAMPLING TIME** : 11:05 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS KALLAYA SOMPHONG

**RECEIVED DATE** : JUNE 14, 2022  
**ANALYTICAL DATE** : JUNE 14-20, 2022  
**REPORT NO.** : 2022-U048018  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AL487-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AL487-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	8.0 (31°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F- C)	6.90	-	0.04
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	904	-	0.09
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0011	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.010	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AL487-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<b>SAMPLE CONDITION</b> WATER'S COLOUR/TURBID SEDIMENT			COLOURLESS/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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND  
INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHA)  
LABORATORY SUPERVISOR

JUNE 24, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : JUNE 28, 2022  
**SAMPLING TIME** : 10:10 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JUNE 28, 2022  
**ANALYTICAL DATE** : JUNE 28 - JULY 5, 2022  
**REPORT NO.** : 2022-U052757  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AM730-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT T22AM730-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	6.4 (32°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	4,640 (32°C)	0.1
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	19.9	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,400	25
FLUORIDE °	mg/L F	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	4.42	0.04
<b>SAMPLE CONDITION</b>				
WATER'S COLOUR/TURBID			YELLOW/CLEAR	
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

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

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHA)  
LABORATORY SUPERVISOR

JULY 8, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JUNE 28, 2022  
**SAMPLING TIME** : 10:00 HOUR  
**SAMPLING METHOD <sup>c</sup>** : GRAB  
**SAMPLING BY <sup>c</sup>** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JUNE 28, 2022  
**ANALYTICAL DATE** : JUNE 28 - JULY 5, 2022  
**REPORT NO.** : 2022-U052758  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AM730-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT T22AM730-0004		
pH <sup>c</sup>	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	7.0 (32°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY <sup>c</sup>	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	4,973 (32°C)	-	0.1
BIOCHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O <sub>2</sub> G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND <sup>a</sup>	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS <sup>a</sup>	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	22.3	≤ 50	5.0
TOTAL DISSOLVED SOLIDS <sup>b</sup>	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,640	≤ 3,000	25
FLUORIDE <sup>c</sup>	mg/L F	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F C)	5.47	-	0.04
<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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHA)  
LABORATORY SUPERVISOR

JULY 8, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JUNE 28, 2022  
**SAMPLING TIME** : 09:45 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS KALLAYA SOMPHONG

**RECEIVED DATE** : JUNE 28, 2022  
**ANALYTICAL DATE** : JUNE 28 - JULY 5, 2022  
**REPORT NO.** : 2022-U052761  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AM730-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AM730-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H+ B)	7.3 (31°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	6.41	-	0.04
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> <sup>-</sup> E)	545	-	0.09
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0009	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.009	-	0.001





PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AM730-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<b>SAMPLE CONDITION</b>					
WATER'S COLOUR/TURBID			COLOURLESS/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

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

REGULATORY STANDARD : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHAJ)  
LABORATORY SUPERVISOR

JULY 8, 2022

## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : WASTEWATER  
**SAMPLING DATE** : JUNE 21, 2022  
**SAMPLING TIME** : 09:35 HOUR  
**SAMPLING METHOD** ° : GRAB  
**SAMPLING BY** ° : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JUNE 22, 2022  
**ANALYTICAL DATE** : JUNE 22 - JULY 4, 2022  
**REPORT NO.** : 2022-U051521  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AM106-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT T22AM106-0003	
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H <sup>+</sup> B)	6.9 (33°C)	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	3,750 (34°C)	0.1
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	33	-
DISSOLVED OXYGEN °	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	3.6	0.5
FLOW RATE °	m³/s	CURRENT METER AND CALCULATION	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	29.0	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,547	25
CHLORIDE °	mg/L Cl <sup>-</sup>	ARGENTOMETRIC METHOD (SM: 4500-Cl <sup>-</sup> B)	254	2.0
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S <sup>2-</sup> F)	< 0.50	0.50
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F <sup>-</sup> C)	3.61	0.04
TOTAL KJELDAHL NITROGEN °	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	< LOQ	1.5
FAT, OIL AND GREASE °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D)	ND	3
CYANIDE °	mg/L CN <sup>-</sup>	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN <sup>-</sup> C AND 4500-CN <sup>-</sup> E)	0.080	0.005
PHENOLS °	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 D)	ND	0.1
FORMALDEHYDE °	mg/L	DISTILLATION AND COLOURIMETRIC METHOD	ND	0.05
RESIDUAL FREE CHLORINE °	mg/L Cl <sub>2</sub>	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	ND	0.1



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	DETECTION LIMIT
			INFLUENT T22AM106-0003	
METALS				
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0015	0.0003
MERCURY °	mg/L Hg	COLD VAPOUR AAS METHOD (SM: 3112 B)	ND	0.0005
HEXAVALENT CHROMIUM °	mg/L Cr <sup>6+</sup>	COLOURIMETRIC METHOD (SM: 3500-Cr B)	ND	0.006
ALUMINUM °	mg/L Al	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	4.74	0.010
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.001
COPPER °	mg/L Cu	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.003	0.001
IRON °	mg/L Fe	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.178	0.002
LEAD °	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.002
MANGANESE °	mg/L Mn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.022	0.001
NICKEL °	mg/L Ni	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.004	0.001
SILVER °	mg/L Ag	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	0.005
ZINC °	mg/L Zn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.017	0.001
SAMPLE CONDITION				
WATER'S COLOUR/TURBID SEDIMENT			YELLOW/TURBID 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.

\* : FLOW RATE CANNOT BE MEASURED.

ND : NON-DETECTABLE.

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

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHAI)  
LABORATORY SUPERVISOR

JULY 5, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JUNE 21, 2022  
**SAMPLING TIME** : 09:30 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS AMONRAT PUTTALEE

**RECEIVED DATE** : JUNE 22, 2022  
**ANALYTICAL DATE** : JUNE 22 - JULY 4, 2022  
**REPORT NO.** : 2022-U051522  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AM106-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT T22AM106-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.1 (33°C)	5.5-9.0	-
ELECTRICAL CONDUCTIVITY °	µmhos/cm	ELECTRICAL CONDUCTIVITY METHOD AT SITE (SM: 2510 B)	4,150 (34°C)	-	0.1
TEMPERATURE °	°C	THERMOMETER AT SITE (SM: 2550 B)	33	≤ 40	-
DISSOLVED OXYGEN °	mg/L	MEMBRANE ELECTRODE METHOD AT SITE (SM: 4500-O G)	2.1	-	0.5
FLOW RATE ° °	m³/s	CURRENT METER AND CALCULATION	-	-	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: 2540 D)	13.2	≤ 50	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: 2540 C)	3,994	≤ 3,000	25
CHLORIDE °	mg/L Cl⁻	ARGENTOMETRIC METHOD (SM: 4500-Cl⁻ B)	280	-	2.0
SULPHIDE °	mg/L	IODOMETRIC METHOD (SM: 4500-S² F)	< 0.50	≤ 1	0.50
FLUORIDE °	mg/L F⁻	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F° C)	5.80	-	0.04
TOTAL KJELDAHL NITROGEN °	mg/L	IN-HOUSE METHOD: UAE.TP.WAS.001 (KJELDAHL METHOD); SM: 4500-Norg C	< LOQ	≤ 100	1.5
FAT, OIL AND GREASE °	mg/L	SOXHLET EXTRACTION METHOD (SM: 5520 D)	ND	≤ 5	3
CYANIDE °	mg/L CN⁻	DISTILLATION, PYRIDINE-BARBITURIC ACID METHOD (SM: 4500-CN⁻ C AND 4500 -CN⁻ E)	0.141	≤ 0.2	0.005
PHENOLS °	mg/L	DISTILLATION, 4-AMINOANTIPYRINE METHOD (SM: 5530 B AND 5530 D)	ND	≤ 1	0.1
FORMALDEHYDE °	mg/L	DISTILLATION AND COLOURIMETRIC METHOD	ND	≤ 1	0.05
RESIDUAL FREE CHLORINE °	mg/L Cl₂	MODIFIED DPD COLOURIMETRIC METHOD (AT SITE)	0.1	≤ 1	0.1



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT T22AM106-0004		
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0006	≤ 0.25	0.0003
MERCURY °	mg/L Hg	COLD VAPOUR AAS METHOD (SM: 3112 B)	ND	≤ 0.005	0.0005
HEXAVALENT CHROMIUM °	mg/L Cr <sup>6+</sup>	COLOURIMETRIC METHOD (SM: 3500-Cr B)	ND	≤ 0.25	0.006
ALUMINUM °	mg/L Al	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	2.66	-	0.010
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
COPPER °	mg/L Cu	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.004	≤ 2.0	0.001
IRON °	mg/L Fe	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.112	-	0.002
LEAD °	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
MANGANESE °	mg/L Mn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.022	≤ 5.0	0.001
NICKEL °	mg/L Ni	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.018	≤ 1.0	0.001
SILVER °	mg/L Ag	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 1.0	0.005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			EFFLUENT T22AM106-0004		
ZINC <sup>c</sup>	mg/L Zn	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.022	≤ 5.0	0.001
<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

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 : STANDARD FOR CONTROL THE EFFLUENT FROM INDUSTRIAL PLANTS, INDUSTRIAL ESTATE AND INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY OF INDUSTRY B.E. 2560 (2017).

\* : FLOW RATE CANNOT BE MEASURED.

ND : NON-DETECTABLE.

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

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHAJ)  
LABORATORY SUPERVISOR

JULY 5, 2022



## ANALYSIS REPORT

**CUSTOMER NAME** : ROJANA INDUSTRIAL MANAGEMENT COMPANY LIMITED  
**ADDRESS** : 2034/115 26TH FLOOR ITALTHAI TOWER, NEW PETCHBURI ROAD BANG KAPI HUAI KHWANG BANGKOK 10310  
**CONTACT INFORMATION** : TEL : 0 2318 6788 e-mail : dusadee\_kpy@hotmail.com  
**SAMPLING SOURCE** : BOWIN  
**SAMPLE TYPE** : EFFLUENT  
**SAMPLING DATE** : JUNE 21, 2022  
**SAMPLING TIME** : 09:23 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR NAPASIT SRIPIM  
**ANALYZED BY** : MISS KALLAYA SOMPHONG

**RECEIVED DATE** : JUNE 22, 2022  
**ANALYTICAL DATE** : JUNE 22-29, 2022  
**REPORT NO.** : 2022-U051528  
**WORK NO.** : 2021-008810  
**ANALYSIS NO.** : T22AM106-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AM106-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM:4500-H° B)	7.9 (33°C)	5.5-9.0	-
BIOCHEMICAL OXYGEN DEMAND °	mg/L	MEMBRANE ELECTRODE METHOD (SM: 4500-O G AND 5210 B)	ND	≤ 20	2.0
CHEMICAL OXYGEN DEMAND °	mg/L	CLOSED REFLUX, COLOURIMETRIC METHOD (SM: 5220 D)	ND	≤ 120	25.0
FLUORIDE °	mg/L F <sup>-</sup>	ION-SELECTIVE ELECTRODE METHOD (SM: 4500-F° C)	6.15	-	0.04
NITRATE °	mg/L NO <sub>3</sub> <sup>-</sup>	CADMIUM REDUCTION METHOD (SM: 4500 -NO <sub>3</sub> ° E)	1,014	-	0.09
METALS					
ARSENIC °	mg/L As	HYDRIDE GENERATION AAS METHOD (SM: 3114 C)	0.0009	≤ 0.25	0.0003
CADMIUM °	mg/L Cd	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.03	0.001
CHROMIUM °	mg/L Cr	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	0.012	-	0.001



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			HOLDING POND T22AM106-0005		
LEAD <sup>c</sup>	mg/L Pb	NITRIC ACID-HYDROCHLORIC ACID DIGESTION AND INDUCTIVELY COUPLED PLASMA (ICP) METHOD (SM: 3030 F AND 3120 B)	ND	≤ 0.2	0.002
<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.

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INDUSTRIAL ZONES, NOTIFICATION OF THE MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
B.E. 2559 (2016) AND INDUSTRIAL EFFLUENT STANDARDS, NOTIFICATION OF THE MINISTRY  
OF INDUSTRY B.E. 2560 (2017).

ND : NON-DETECTABLE.

*Benjawan V.*

(MISS BENJAWAN VIRIYOTHA)  
LABORATORY SUPERVISOR

JULY 5, 2022