

## ANALYSIS REPORT

**CUSTOMER NAME** : TPI POLENE PUBLIC COMPANY LIMITED  
**ADDRESS** : 299 MOO 5 MITRAPARP ROAD MITTRAPHAP TABKWANG KAENGKOI SARABURI 18260  
**CONTACT INFORMATION** : TEL : 06 4294 9161 e-mail : chod.padmuk@gmail.com  
**SAMPLING SOURCE** : บ่อน้ำบาดาลสถานีวิจัยทับกวาง  
**SAMPLE TYPE** : GROUNDWATER  
**SAMPLING DATE** : SEPTEMBER 21, 2023  
**SAMPLING TIME** : 09:45 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR MANIT PANCHOT  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM

**RECEIVED DATE** : SEPTEMBER 21, 2023  
**ANALYTICAL DATE** : SEPTEMBER 21-27, 2023  
**REPORT NO.** : 2023-U083694  
**WORK NO.** : 2022-010806  
**ANALYSIS NO.** : T23AS793-0003

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			GROUNDWATER T23AS793-0003		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H+ B)	6.6 (28°C)	-	-
TURBIDITY °	NTU	NEPHELOMETRIC METHOD (SM: PART 2130 B)	1.2	-	0.1
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	-	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	486	-	25
TOTAL HARDNESS °	mg/L as CaCO <sub>3</sub>	EDTA TITRIMETRIC METHOD (SM: PART 2340 C)	396	-	4.0
SULPHATE °	mg/L SO <sub>4</sub> <sup>2-</sup>	TURBIDIMETRIC METHOD (SM: PART 4500 -SO <sub>4</sub> <sup>2-</sup> E)	67.6	-	0.3
CHLORIDE °	mg/L Cl <sup>-</sup>	ARGENTOMETRIC METHOD (SM: PART 4500-Cl <sup>-</sup> B)	8.9	-	2.0



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			GROUNDWATER T23AS793-0003		
METALS					
TOTAL IRON <sup>c</sup>	mg/L Fe	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	-	0.005
SAMPLE CONDITION					
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

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 : GROUNDWATER QUALITY STANDARDS, NOTIFICATION OF THE NATIONAL ENVIRONMENT BOARD NO.20 (B.E. 2543)  
ISSUED UNDER THE ENHANCEMENT AND CONSERVATION OF NATIONAL ENVIRONMENTAL QUALITY ACT B.E. 2535.

ND : NON-DETECTABLE.

< LOQ : < LIMIT OF QUANTITATION (TOTAL IRON  $\geq$  0.005 AND < 0.050 mg/L).

*Bhuchonk*

(MR BHUCHONK PANICHLERTUMPI)  
LABORATORY SUPERVISOR

OCTOBER 4, 2023

## ANALYSIS REPORT

**CUSTOMER NAME** : TPI POLENE PUBLIC COMPANY LIMITED

**ADDRESS** : 299 MOO 5 MITRAPARP ROAD MITTRAPHAP TABKWANG KAENGKOI SARABURI 18260

**CONTACT INFORMATION** : TEL : 06 4294 9161 e-mail : chod.padmuk@gmail.com

**SAMPLING SOURCE** : บ่อน้ำบาดาลวัดพระธาตุเจริญธรรม

**SAMPLE TYPE** : GROUNDWATER

**SAMPLING DATE** : SEPTEMBER 21, 2023

**SAMPLING TIME** : 09:15 HOUR

**SAMPLING METHOD °** : GRAB

**SAMPLING BY °** : MR MANIT PANCHOT

**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM

**RECEIVED DATE** : SEPTEMBER 21, 2023

**ANALYTICAL DATE** : SEPTEMBER 21-27, 2023

**REPORT NO.** : 2023-U083695

**WORK NO.** : 2022-010806

**ANALYSIS NO.** : T23AS793-0004

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			GROUNDWATER T23AS793-0004		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H+ B)	6.6 (28°C)	-	-
TURBIDITY °	NTU	NEPHELOMETRIC METHOD (SM: PART 2130 B)	0.2	-	0.1
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	-	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	665	-	25
TOTAL HARDNESS °	mg/L as CaCO <sub>3</sub>	EDTA TITRIMETRIC METHOD (SM: PART 2340 C)	478	-	4.0
SULPHATE °	mg/L SO <sub>4</sub> <sup>2-</sup>	TURBIDIMETRIC METHOD (SM: PART 4500 -SO <sub>4</sub> <sup>2-</sup> E)	91.1	-	0.3
CHLORIDE °	mg/L Cl <sup>-</sup>	ARGENTOMETRIC METHOD (SM: PART 4500-Cl <sup>-</sup> B)	41.9	-	2.0



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			GROUNDWATER T23AS793-0004		
METALS					
TOTAL IRON °	mg/L Fe	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	-	0.005
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR		
SEDIMENT			-		

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

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

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< LOQ : < LIMIT OF QUANTITATION (TOTAL IRON  $\geq$  0.005 AND < 0.050 mg/L).

*Bhuchonk p.*

(MR BHUCHONK PANICHLERTUMPI)  
LABORATORY SUPERVISOR

OCTOBER 4, 2023

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**CONTACT INFORMATION** : TEL : 06 4294 9161 e-mail : chod.padmuk@gmail.com  
**SAMPLING SOURCE** : บ่อน้ำบาดาลชุมชนเกษตรสัมพันธ์  
**SAMPLE TYPE** : GROUNDWATER  
**SAMPLING DATE** : SEPTEMBER 21, 2023  
**SAMPLING TIME** : 09:35 HOUR  
**SAMPLING METHOD °** : GRAB  
**SAMPLING BY °** : MR MANIT PANCHOT  
**ANALYZED BY** : MISS NAPAPORN KHUNNOKKHUM

**RECEIVED DATE** : SEPTEMBER 21, 2023  
**ANALYTICAL DATE** : SEPTEMBER 21-27, 2023  
**REPORT NO.** : 2023-U083696  
**WORK NO.** : 2022-010806  
**ANALYSIS NO.** : T23AS793-0005

PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			GROUNDWATER T23AS793-0005		
pH °	-	ELECTROMETRIC METHOD AT SITE (SM: PART 4500-H+ B)	6.6 (29°C)	-	-
TURBIDITY °	NTU	NEPHELOMETRIC METHOD (SM: PART 2130 B)	1.3	-	0.1
TOTAL SUSPENDED SOLIDS °	mg/L	TOTAL SUSPENDED SOLIDS DRIED AT 103-105 °C (SM: PART 2540 D)	ND	-	5.0
TOTAL DISSOLVED SOLIDS °	mg/L	TOTAL DISSOLVED SOLIDS DRIED AT 180 °C (SM: PART 2540 C)	484	-	25
TOTAL HARDNESS °	mg/L as CaCO <sub>3</sub>	EDTA TITRIMETRIC METHOD (SM: PART 2340 C)	416	-	4.0
SULPHATE °	mg/L SO <sub>4</sub> <sup>2-</sup>	TURBIDIMETRIC METHOD (SM: PART 4500 -SO <sub>4</sub> <sup>2-</sup> E)	70.3	-	0.3
CHLORIDE °	mg/L Cl <sup>-</sup>	ARGENTOMETRIC METHOD (SM: PART 4500-Cl <sup>-</sup> B)	9.4	-	2.0



PARAMETER	UNIT	METHOD OF ANALYSIS	RESULT	REGULATORY STANDARD	DETECTION LIMIT
			GROUNDWATER T23AS793-0005		
METALS					
TOTAL IRON <sup>c</sup>	mg/L Fe	IN-HOUSE METHOD: UAE.TP.GW.01 (NITRIC ACID DIGESTION AND DIRECT AIR ACETYLENE FLAME METHOD); SM: PART 3030 E AND PART 3111 B	< LOQ	-	0.005
SAMPLE CONDITION					
WATER'S COLOUR/TURBID			COLOURLESS/CLEAR		
SEDIMENT			YELLOW		

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