

ภาคผนวก จ-7
รายงานผลการวิเคราะห์น้ำดื่มของโครงการ



Accreditation No. 1031/47

Analysis / Test Report

Client : Italthai Engineering Co., Ltd.
999/9, Navanakorn Industrial Estate, Tambon Na Klang, Amphoe Sung Noen, Nakhon
Ratchasima Thailand 30380

P/O :
Project Name : REN KORAT
Project Location :

Lot ID: 2329823
Date Received : Mar 18, 2023
Date Reported : Mar 28, 2023
Report Number : 2596096-1

Page 1 of 4

Sample Number	2329823-1						
Sampled Date	Mar 17, 2023 11:55 AM						
Sample Description	Drinking water						
Location	จุดพักแรม (rest area)						
Date Analysis Commenced	Mar 18, 2023						
Condition of Sample	Contained in six plastic bottles and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Aluminum	mg/L	0.003	0.005	0.48	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Arsenic	mg/L	0.0003	0.0005	0.0009	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Barium	mg/L	0.0003	0.0005	0.006	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Chromium	mg/L	0.0003	0.0005	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.001	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Iron	mg/L	0.003	0.005	0.005	≤0.3	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

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Approved by

Tuanjai Thangklang
Manager

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Sample Number	2329823-1						
Sampled Date	Mar 17, 2023 11:55 AM						
Sample Description	Drinking water						
Location	จุดพักแรม (rest area)						
Date Analysis Commenced	Mar 18, 2023						
Condition of Sample	Contained in six plastic bottles and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Lead	mg/L	0.0003	0.0005	<0.0005	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Manganese	mg/L	0.0003	0.0005	0.0007	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Selenium	mg/L	0.0003	0.0005	Not Detected	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Silver	mg/L	0.0003	0.0005	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.007	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Microbiological Testing							
Escherichia coli	in 100 mL	-	-	Not Detected	Not Detected	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 F	Bangkok
Salmonella spp.	in 100 mL	-	-	Not Detected	Not Detected	ISO 19250 (2010)	Bangkok

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Project Location :

Lot ID: 2329823

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Date Reported : Mar 28, 2023

Report Number : 2596096-1

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Sample Number	2329823-1
Sampled Date	Mar 17, 2023 11:55 AM
Sample Description	Drinking water
Location	ที่พักผ่อน (rest area)
Date Analysis Commenced	Mar 18, 2023
Condition of Sample	Contained in six plastic bottles and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
<i>Staphylococcus aureus</i>	CFU/100mL	-	-	<1	≤100	In-house method STM No. 01-054 in connection with: - Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 9213 B - FDA BAM online, 2016 (Chapter 12)	Bangkok
Total Coliform	MPN/100mL	-	-	<1.1	<2.2	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B	Bangkok
Water Testing							
Alkylbenzene Sulfonate as MBAS	mg/L	0.05	0.1	Not Detected	≤0.2	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5540 C	Bangkok
Chloride as Cl	mg/L	0.06	0.2	54.5	≤250.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4110 B	Bangkok
Color	Color unit	-	5	<5	≤20	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2120 B	Bangkok
Cyanide as CN	mg/L	0.002	0.005	Not Detected	≤0.1	In-house method : STM 04-007 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - CN (C, E)	Bangkok
Fluoride as F	mg/L	0.05	0.1	0.2	≤1.5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4110 B	Bangkok
Nitrate as N	mg/L	0.06	0.2	<0.2	≤4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4110 B	Bangkok

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P/O :

Project Name : REN KORAT

Project Location :

Lot ID: 2329823

Date Received : Mar 18, 2023

Date Reported : Mar 28, 2023

Report Number : 2596096-1

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Sample Number	2329823-1
Sampled Date	Mar 17, 2023 11:55 AM
Sample Description	Drinking water
Location	ที่พักผ่อน (rest area)
Date Analysis Commenced	Mar 18, 2023
Condition of Sample	Contained in six plastic bottles and two glass vials, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Odour		-	-	Odourless	Odourless	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2150 B	Bangkok
pH at 25 degree C		-	-	7.8	6.5-8.5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Bangkok
Phenol	mg/L	0.0005	0.001	Not Detected	≤0.001	In-house method : STM 04-022 based on Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 5530 C	Bangkok
Sulfate	mg/L	0.15	0.5	18.2	≤250.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 4110 B	Bangkok
Total Hardness as CaCO3	mg/L	0.5	1	7	≤100	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2340 C, 2340 C	Bangkok
Total Solids Dried at 103-105 degree C	mg/L	-	5	232	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2540 B	Bangkok
Turbidity	NTU	-	0.1	0.25	≤5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Bangkok

Guideline : Notification of the Ministry of Public Health No. 61 B.E. 2524 & 135 B.E. 2534 on bottled drinking water (No.2) & Pathogenic 416 B.E. 2563

Sampling By : Pongsaton Chaitip

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- The laboratory has been accepted as an accredited laboratory complying with the ISO/IEC 17025.

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999/9, Navanakorn Industrial Estate, Tambon Na Klang, Amphoe Sung Noen, Nakhon Ratchasima Thailand 30380

P/O :

Project Name : REN KORAT

Project Location:

Lot ID: 2336786

Date Received : Apr 01, 2023

Date Reported : Apr 05, 2023

Report Number : 2610867-1

Page 1 of 1

Sample Number	2336786-1						
Sampled Date	Mar 31, 2023 1:45 PM						
Sample Description	Drinking water						
Location	จุดพักนอน (Rest Area)						
Date Analysis Commenced	Apr 03, 2023						
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Aluminium	mg/L	0.003	0.005	0.38	≤0.2	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok

Guideline : Notification of the Ministry of Public Health No. 61 B.E. 2524 & 135 B.E. 2534 on bottled drinking water (No.2) & 316 B.E. 2553

Sampling By : Pongsaton Chaitip

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Sawitree Noisangiam
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