

## ภาคผนวก ค-3

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ผลการตรวจวิเคราะห์คุณภาพน้ำผิวดิน



## Analysis / Test Report

**Client :** Rojana Industrial Park Public Co., Ltd.  
2034/115 26TH Fl. Italthai Towe, New Petchburi Road, Bangkok, Huaykwang,  
Bangkok Thailand 10310  
**P/O :** RJN-LCB-011/66  
**Project Name :** Laemchabang  
**Project Location :**

**TESTING**  
**No.0042**  
**Lot ID: 2358105**  
Date Received : Jun 14, 2023  
Date Reported : Jun 22, 2023  
Report Number : 2657084-1

Page 1 of 12

<b>Sample Number</b>	2358105-1							
<b>Sampled Date</b>	Jun 14, 2023 11:36 AM							
<b>Sample Description</b>	Surface Water							
<b>Location</b>	SW1 : ห้วยมาบบริเวรต้นน้ำเมื่อเทียบกับจุดปล่อยน้ำทิ้งของโครงการประมาณ 1,320 เมตร							
<b>Date Analysis Commenced</b>	Jun 14, 2023							
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)							

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Metals Testing</b>								
<sup>[A]</sup> Aluminium	mg/L	0.003	0.005	0.09	No Standard	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Arsenic	mg/L	0.0003	0.0005	0.005	≤0.01	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Copper	mg/L	0.0003	0.0005	<0.0005	≤0.10	≤0.10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
<sup>[A]</sup> Iron	mg/L	0.003	0.005	0.34	No Standard	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Lead	mg/L	0.0003	0.0005	Not Detected	≤0.05	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Manganese	mg/L	0.0003	0.0005	0.57	≤1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory. ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

*N. Banchongkit*

Narumon Banchongkit  
Supervisor

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<b>Sample Number</b>	2358105-1							
<b>Sampled Date</b>	Jun 14, 2023 11:36 AM							
<b>Sample Description</b>	Surface Water							
<b>Location</b>	SW1 : ห้วยมาบบริเวณต้นน้ำเมื่อเทียบกับจุดปล่อยน้ำทิ้งของโครงการประมาณ 1,320 เมตร							
<b>Date Analysis Commenced</b>	Jun 14, 2023							
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)							
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Metals Testing</b>								
<sup>[A]</sup> Nickel	mg/L	0.0003	0.0005	0.001	≤0.10	≤0.10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Zinc	mg/L	0.003	0.005	0.01	≤1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<b>Microbiological Testing</b>								
<sup>[A]</sup> Fecal Coliform	MPN/100mL	-	-	1300.0	≤4000	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 E	Bangkok
<b>Water Testing</b>								
Ammonia Nitrogen *	mg/L	0.02	0.05	0.41	≤0.5	≤0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
BOD (5 days at 20 Degree C) *	mg/L	-	2.0	<2.0	≤2	≤4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
Cyanide as CN	mg/L	0.001	0.005	Not Detected	≤0.005	≤0.005	In-house method : STM 02-003 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - CN (C, E)	Rayong
Dissolved Oxygen *	mg/L	-	0.1	7.5	≥4	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
Flow rate *	m3/s	-	-	0.000	No Standard	No Standard	Flow meter	Rayong

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<b>Sample Number</b>	2358105-1							
<b>Sampled Date</b>	Jun 14, 2023 11:36 AM							
<b>Sample Description</b>	Surface Water							
<b>Location</b>	SW1 : ห้วยมาบบริเวณต้นน้ำเมื่อเทียบกับจุดปล่อยน้ำทิ้งของโครงการประมาณ 1,320 เมตร							
<b>Date Analysis Commenced</b>	Jun 14, 2023							
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)							

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Water Testing</b>								
Nitrate as N *	mg/L	0.015	0.05	0.55	≤5	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong
pH at 25 degree C		-	-	7.5	5.0-9.0	5.0-9.0	In-house method : STM 02-005 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	28.6	(c)	(c)	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong

**Guideline :** (1) Notification of the National Environmental Board, No. 8, B.E.2537 issued under the Enhancement and Conservation of National Environmental Quality Act. B.E.2535, published in the Royal Government Gazette, Vol. 111, Part 16, Dated February 24, B.E. 2537 (Class 3)  
(2) Notification of the National Environmental Board, No. 8, B.E.2537 issued under the Enhancement and Conservation of National Environmental Quality Act. B.E.2535, published in the Royal Government Gazette, Vol. 111, Part 16, Dated February 24, B.E. 2537 (Class 4)  
(a) Not Change from natural condition  
(b) Non Objectionable  
(c) Change from Natural condition not more than 3 degree C

**Sampling By :** Nattawut Athomprommarat ทะเบียนเลขที่ ว-323-จ-0006 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

**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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## Analysis / Test Report

**Client :** Rojana Industrial Park Public Co., Ltd.  
2034/115 26TH Fl. Italthai Towe, New Petchburi Road, Bangkapi, Huaykwang,  
Bangkok Thailand 10310  
**P/O :** RJN-LCB-011/66  
**Project Name :** Laemchabang  
**Project Location :**

**TESTING**  
**No.0042**  
**Lot ID: 2358105**  
Date Received : Jun 14, 2023  
Date Reported : Jun 22, 2023  
Report Number : 2657084-1

Page 4 of 12

**Sample Number** 2358105-2  
**Sampled Date** Jun 14, 2023 11:10 AM  
**Sample Description** Surface Water  
**Location** SW2 : ห้วยมาบบริเวณจุดปล่อยน้ำทิ้งของโครงการ  
**Date Analysis Commenced** Jun 14, 2023  
**Condition of Sample** Contained in two glass vials, one BOD bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Metals Testing</b>								
<sup>[A]</sup> Aluminium	mg/L	0.003	0.005	0.04	No Standard	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Arsenic	mg/L	0.0003	0.0005	0.006	≤0.01	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Copper	mg/L	0.0003	0.0005	Not Detected	≤0.10	≤0.10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
<sup>[A]</sup> Iron	mg/L	0.003	0.005	2.24	No Standard	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Lead	mg/L	0.0003	0.0005	0.001	≤0.05	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Manganese	mg/L	0.0003	0.0005	1.90	≤1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok

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2034/115 26TH Fl. Italthai Towe, New Petchburi Road, Bangkok, Huaykwang,  
Bangkok Thailand 10310  
**P/O :** RJN-LCB-011/66  
**Project Name :** Laemchabang  
**Project Location :**

**TESTING**  
**No.0042**  
**Lot ID: 2358105**  
Date Received : Jun 14, 2023  
Date Reported : Jun 22, 2023  
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Page 5 of 12

<b>Sample Number</b>	2358105-2							
<b>Sampled Date</b>	Jun 14, 2023 11:10 AM							
<b>Sample Description</b>	Surface Water							
<b>Location</b>	SW2 : ห้วยมาบรีเวจเจดปล่อยน้ำทิ้งของโครงการ							
<b>Date Analysis Commenced</b>	Jun 14, 2023							
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)							

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline ( 1 )	Guideline ( 2 )	Method	Testing Location
<b>Metals Testing</b>								
<sup>[A]</sup> Nickel	mg/L	0.0003	0.0005	0.001	≤0.10	≤0.10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Zinc	mg/L	0.003	0.005	0.008	≤1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<b>Microbiological Testing</b>								
<sup>[A]</sup> Fecal Coliform	MPN/100mL	-	-	1300.0	≤4000	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 E	Bangkok
<b>Water Testing</b>								
Ammonia Nitrogen *	mg/L	0.02	0.05	0.43	≤0.5	≤0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
BOD (5 days at 20 Degree C) *	mg/L	-	2.0	<2.0	≤2	≤4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
Cyanide as CN	mg/L	0.001	0.005	Not Detected	≤0.005	≤0.005	In-house method : STM 02-003 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - CN (C, E)	Rayong
Dissolved Oxygen *	mg/L	-	0.1	4.5	≥4	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
Flow rate *	m3/s	-	-	0.000	No Standard	No Standard	Flow meter	Rayong

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**Project Name :** Laemchabang  
**Project Location :**

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Page 6 of 12

**Sample Number** 2358105-2  
**Sampled Date** Jun 14, 2023 11:10 AM  
**Sample Description** Surface Water  
**Location** SW2 : ห้วยมาบบริเวณจุดปล่อยน้ำทิ้งของโครงการ  
**Date Analysis Commenced** Jun 14, 2023  
**Condition of Sample** Contained in two glass vials, one BOD bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Water Testing</b>								
Nitrate as N *	mg/L	0.015	0.05	<0.05	≤5	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong
pH at 25 degree C		-	-	7.5	5.0-9.0	5.0-9.0	In-house method : STM 02-005 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.2	(c)	(c)	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong

**Guideline :** (1) Notification of the National Environmental Board, No. 8, B.E.2537 issued under the Enhancement and Conservation of National Environmental Quality Act. B.E.2535, published in the Royal Government Gazette, Vol. 111, Part 16, Dated February 24, B.E. 2537 (Class 3)  
(2) Notification of the National Environmental Board, No. 8, B.E.2537 issued under the Enhancement and Conservation of National Environmental Quality Act. B.E.2535, published in the Royal Government Gazette, Vol. 111, Part 16, Dated February 24, B.E. 2537 (Class 4)  
(a) Not Change from natural condition  
(b) Non Objectionable  
(c) Change from Natural condition not more than 3 degree C

**Sampling By :** Nattawut Athomprommarat ทะเบียนเลขที่ ว-323-จ-0006 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

**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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Page 7 of 12

<b>Sample Number</b>	2358105-3							
<b>Sampled Date</b>	Jun 14, 2023 10:45 AM							
<b>Sample Description</b>	Surface Water							
<b>Location</b>	SW3 : ห้วยมาบบริเวณท้ายน้ำเมื่อเทียบกับจุดปล่อยน้ำทิ้งของโครงการประมาณ 675 เมตร							
<b>Date Analysis Commenced</b>	Jun 14, 2023							
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)							

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline ( 1 )	Guideline ( 2 )	Method	Testing Location
<b>Metals Testing</b>								
<sup>[A]</sup> Aluminium	mg/L	0.003	0.005	0.06	No Standard	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Arsenic	mg/L	0.0003	0.0005	0.002	≤0.01	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Copper	mg/L	0.0003	0.0005	Not Detected	≤0.10	≤0.10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
<sup>[A]</sup> Iron	mg/L	0.003	0.005	0.47	No Standard	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Lead	mg/L	0.0003	0.0005	0.001	≤0.05	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Manganese	mg/L	0.0003	0.0005	0.73	≤1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory, ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

Approved by

*N. Banchongkit*

Narumon Banchongkit  
Supervisor

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## Analysis / Test Report

**Client :** Rojana Industrial Park Public Co., Ltd.  
2034/115 26TH Fl. Italthai Towe, New Petchburi Road, Bangkok, Huaykwang,  
Bangkok Thailand 10310  
**P/O :** RJN-LCB-011/66  
**Project Name :** Laemchabang  
**Project Location :**

**TESTING**  
**No.0042**  
**Lot ID: 2358105**  
Date Received : Jun 14, 2023  
Date Reported : Jun 22, 2023  
Report Number : 2657084-1

Page 8 of 12

<b>Sample Number</b>	2358105-3							
<b>Sampled Date</b>	Jun 14, 2023 10:45 AM							
<b>Sample Description</b>	Surface Water							
<b>Location</b>	SW3 : ห้วยมาบบริเวณท้ายน้ำเมื่อเทียบกับจุดปล่อยน้ำทิ้งของโครงการประมาณ 675 เมตร							
<b>Date Analysis Commenced</b>	Jun 14, 2023							
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)							
<b>Analyte</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ (LOR)</b>	<b>Result</b>	<b>Guideline (1)</b>	<b>Guideline (2)</b>	<b>Method</b>	<b>Testing Location</b>
<b>Metals Testing</b>								
<sup>[A]</sup> Nickel	mg/L	0.0003	0.0005	<0.0005	≤0.10	≤0.10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Zinc	mg/L	0.003	0.005	0.007	≤1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<b>Microbiological Testing</b>								
<sup>[A]</sup> Fecal Coliform	MPN/100mL	-	-	33.0	≤4000	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 E	Bangkok
<b>Water Testing</b>								
Ammonia Nitrogen *	mg/L	0.02	0.05	0.13	≤0.5	≤0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
BOD (5 days at 20 Degree C) *	mg/L	-	2.0	<2.0	≤2	≤4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
Cyanide as CN	mg/L	0.001	0.005	Not Detected	≤0.005	≤0.005	In-house method : STM 02-003 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - CN (C, E)	Rayong
Dissolved Oxygen *	mg/L	-	0.1	4.2	≥4	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
Flow rate *	m3/s	-	-	0.005	No Standard	No Standard	Flow meter	Rayong

Approved by

N. Banchongkit

Narumon Banchongkit  
Supervisor

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## Analysis / Test Report

**Client :** Rojana Industrial Park Public Co., Ltd.  
2034/115 26TH Fl. Italthai Towe, New Petchburi Road, Bangkok, Huaykwang,  
Bangkok Thailand 10310  
**P/O :** RJN-LCB-011/66  
**Project Name :** Laemchabang  
**Project Location :**

**TESTING**  
**No.0042**  
**Lot ID: 2358105**  
Date Received : Jun 14, 2023  
Date Reported : Jun 22, 2023  
Report Number : 2657084-1

Page 9 of 12

<b>Sample Number</b>	2358105-3							
<b>Sampled Date</b>	Jun 14, 2023 10:45 AM							
<b>Sample Description</b>	Surface Water							
<b>Location</b>	SW3 : ห้วยมาบบริเวณท้ายน้ำเมื่อเทียบกับจุดปล่อยน้ำทิ้งของโครงการประมาณ 675 เมตร							
<b>Date Analysis Commenced</b>	Jun 14, 2023							
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)							

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Water Testing</b>								
Nitrate as N *	mg/L	0.015	0.05	Not Detected	≤5	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong
pH at 25 degree C		-	-	7.4	5.0-9.0	5.0-9.0	In-house method : STM 02-005 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	28.6	(c)	(c)	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong

**Guideline :** (1) Notification of the National Environmental Board, No. 8, B.E.2537 issued under the Enhancement and Conservation of National Environmental Quality Act. B.E.2535, published in the Royal Government Gazette, Vol. 111, Part 16, Dated February 24, B.E. 2537 (Class 3)  
(2) Notification of the National Environmental Board, No. 8, B.E.2537 issued under the Enhancement and Conservation of National Environmental Quality Act. B.E.2535, published in the Royal Government Gazette, Vol. 111, Part 16, Dated February 24, B.E. 2537 (Class 4)  
(a) Not Change from natural condition  
(b) Non Objectionable  
(c) Change from Natural condition not more than 3 degree C

**Sampling By :** Nattawat Athomprommarat ทะเบียนเลขที่ ว-323-จ-0006 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

**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.

The above results are valid only for the analyzed/tested sample(s) as indicated in this report. No part of this report or certificate may be reproduced in any form without written consent from the Laboratory, ALS Laboratory Group (Thailand) strongly recommends that this report is not reproduced except in full.

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## Analysis / Test Report

TESTING

No.0042

Lot ID: 2358105

Date Received : Jun 14, 2023

Date Reported : Jun 22, 2023

Report Number : 2657084-1

Client : Rojana Industrial Park Public Co., Ltd.

2034/115 26TH Fl. Italhai Towe, New Petchburi Road, Bangkok, Huaykwang,  
Bangkok Thailand 10310

P/O : RJN-LCB-011/66

Project Name : Laemchabang

Project Location :

Page 10 of 12

Sample Number	2358105-5
Sampled Date	Jun 14, 2023 10:16 AM
Sample Description	Surface Water
Location	SW5 : ห้วยคุดบริเวณท้ายน้ำเมื่อเทียบกับที่ตั้งโครงการประมาณ 400 เมตร
Date Analysis Commenced	Jun 14, 2023
Condition of Sample	Contained in two glass vials, one BOD bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline ( 1 )	Guideline ( 2 )	Method	Testing Location
<b>Metals Testing</b>								
<sup>[A]</sup> Aluminium	mg/L	0.003	0.005	0.21	No Standard	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Arsenic	mg/L	0.0003	0.0005	0.004	≤0.01	≤0.01	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Copper	mg/L	0.0003	0.0005	0.0007	≤0.10	≤0.10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
<sup>[A]</sup> Iron	mg/L	0.003	0.005	0.41	No Standard	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Lead	mg/L	0.0003	0.0005	0.006	≤0.05	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Manganese	mg/L	0.0003	0.0005	0.75	≤1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok

Approved by

N. Banchongkit

Narumon Banchongkit  
Supervisor

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## Analysis / Test Report

**Client :** Rojana Industrial Park Public Co., Ltd.  
2034/115 26TH Fl. Italthai Towe, New Petchburi Road, Bangkok, Huaykwang,  
Bangkok Thailand 10310  
**P/O :** RJN-LCB-011/66  
**Project Name :** Laemchabang  
**Project Location :**

**TESTING**  
**No.0042**  
**Lot ID: 2358105**  
Date Received : Jun 14, 2023  
Date Reported : Jun 22, 2023  
Report Number : 2657084-1

Page 11 of 12

<b>Sample Number</b>	2358105-5							
<b>Sampled Date</b>	Jun 14, 2023 10:16 AM							
<b>Sample Description</b>	Surface Water							
<b>Location</b>	SW5 : ห้วยอีคุดบริเวณท้ายน้ำเมื่อเทียบกับที่ตั้งโครงการประมาณ 400 เมตร							
<b>Date Analysis Commenced</b>	Jun 14, 2023							
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)							
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline ( 1 )	Guideline ( 2 )	Method	Testing Location
<b>Metals Testing</b>								
<sup>[A]</sup> Nickel	mg/L	0.0003	0.0005	0.005	≤0.10	≤0.10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<sup>[A]</sup> Zinc	mg/L	0.003	0.005	0.007	≤1	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
<b>Microbiological Testing</b>								
<sup>[A]</sup> Fecal Coliform	MPN/100mL	-	-	130.0	≤4000	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 E	Bangkok
<b>Water Testing</b>								
Ammonia Nitrogen *	mg/L	0.02	0.05	0.48	≤0.5	≤0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
BOD (5 days at 20 Degree C) *	mg/L	-	2.0	<2.0	≤2	≤4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 5210 B, part 4500 - O G	Rayong
Cyanide as CN	mg/L	0.001	0.005	Not Detected	≤0.005	≤0.005	In-house method : STM 02-003 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - CN (C, E)	Rayong
Dissolved Oxygen *	mg/L	-	0.1	6.0	≥4	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-O (C)	Rayong
Flow rate *	m3/s	-	-	0.000	No Standard	No Standard	Flow meter	Rayong

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*N. Banchongkit*

Narumon Banchongkit  
Supervisor

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## Analysis / Test Report

**Client :** Rojana Industrial Park Public Co., Ltd.  
2034/115 26TH Fl. Italthai Towe, New Petchburi Road, Bangkok, Huaykwang,  
Bangkok Thailand 10310  
**P/O :** RJN-LCB-011/66  
**Project Name :** Laemchabang  
**Project Location :**

**TESTING**  
**No.0042**  
**Lot ID: 2358105**  
Date Received : Jun 14, 2023  
Date Reported : Jun 22, 2023  
Report Number : 2657084-1

Page 12 of 12

<b>Sample Number</b>	2358105-5							
<b>Sampled Date</b>	Jun 14, 2023 10:16 AM							
<b>Sample Description</b>	Surface Water							
<b>Location</b>	SW5 : ห้วยอีคุดบริเวณท้ายน้ำเมื่อเทียบกับที่ตั้งโครงการประมาณ 400 เมตร							
<b>Date Analysis Commenced</b>	Jun 14, 2023							
<b>Condition of Sample</b>	Contained in two glass vials, one BOD bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)							

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline (1)	Guideline (2)	Method	Testing Location
<b>Water Testing</b>								
Nitrate as N *	mg/L	0.015	0.05	0.06	≤5	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NO3 (E)	Rayong
pH at 25 degree C		-	-	7.8	5.0-9.0	5.0-9.0	In-house method : STM 02-005 based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.9	(c)	(c)	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2550 B	Rayong

**Guideline :** (1) Notification of the National Environmental Board, No. 8, B.E.2537 issued under the Enhancement and Conservation of National Environmental Quality Act. B.E.2535, published in the Royal Government Gazette, Vol. 111, Part 16, Dated February 24, B.E. 2537 (Class 3)  
(2) Notification of the National Environmental Board, No. 8, B.E.2537 issued under the Enhancement and Conservation of National Environmental Quality Act. B.E.2535, published in the Royal Government Gazette, Vol. 111, Part 16, Dated February 24, B.E. 2537 (Class 4)  
(a) Not Change from natural condition  
(b) Non Objectionable  
(c) Change from Natural condition not more than 3 degree C

**Sampling By :** Nattawut Athomprommarat ทะเบียนเลขที่ ว-323-จ-0006 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

**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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*N. Banchongkit*

Narumon Banchongkit  
Supervisor

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ผลการตรวจวิเคราะห์คุณภาพน้ำใต้ดิน





## Analysis / Test Report

**Client :** Rojana Industrial Park Public Co., Ltd.  
2034/115 26TH Fl. Italthai Towe, New Petchburi Road, Bangkapi, Huaykwang, Bangkok  
Thailand 10310  
**P/O :** RJN-LCB-011/66  
**Project Name :** Laemchabang  
**Project Location :**

**TESTING**  
**No.0009**  
**Lot ID: 2358113**  
Date Received : Jun 15, 2023  
Date Reported : Jun 26, 2023  
Report Number : 2657097-1

Page 1 of 8

<b>Sample Number</b>	2358113-5
<b>Sampled Date</b>	Jun 15, 2023 10:45 AM
<b>Sample Description</b>	Ground Water
<b>Location</b>	GW5 : พื้นที่สีเขียวด้านทิศตะวันออกเฉียงเหนือของโครงการ
<b>Date Analysis Commenced</b>	Jun 15, 2023
<b>Condition of Sample</b>	Contained in two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Metals Testing</b>							
Aluminium	mg/L	0.003	0.005	0.03	No Standard	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	0.0005	≤0.01	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	1.17	No Standard	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	≤0.003	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	0.005	No Standard	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	Not Detected	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
Iron	mg/L	0.003	0.005	0.06	No Standard	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

*Sawitree N.*

Sawitree Noisangiam  
Manager

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## Analysis / Test Report

TESTING  
No.0009

**Lot ID: 2358113**

Date Received : Jun 15, 2023

Date Reported : Jun 26, 2023

Report Number : 2657097-1

**Client :** Rojana Industrial Park Public Co., Ltd.

2034/115 26TH Fl. Italhai Towe, New Petchburi Road, Bangkapi, Huaykwang, Bangkok

Thailand 10310

**P/O :** RJN-LCB-011/66

**Project Name :** Laemchabang

**Project Location :**

Page 2 of 8

<b>Sample Number</b>	2358113-5
<b>Sampled Date</b>	Jun 15, 2023 10:45 AM
<b>Sample Description</b>	Ground Water
<b>Location</b>	GW5 : พื้นที่สีเขียวด้านทิศตะวันออกเฉียงเหนือของโครงการ
<b>Date Analysis Commenced</b>	Jun 15, 2023
<b>Condition of Sample</b>	Contained in two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Metals Testing</b>							
Lead	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
Manganese	mg/L	0.0003	0.0005	0.76	≤0.5	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	≤0.001	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Nickel	mg/L	0.0003	0.0005	0.005	≤0.02	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	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	No Standard	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

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Approved by

*Sawitree N.*

Sawitree Noisangiam

Manager

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## Analysis / Test Report

Client : Rojana Industrial Park Public Co., Ltd.

2034/115 26TH Fl. ItalThai Towe, New Petchburi Road, Bangkok, Huaykwang, Bangkok  
Thailand 10310

P/O : RJN-LCB-011/66

Project Name : Laemchabang

Project Location :

TESTING

No.0009

Lot ID: 2358113

Date Received : Jun 15, 2023

Date Reported : Jun 26, 2023

Report Number : 2657097-1

Page 3 of 8

Sample Number	2358113-5
Sampled Date	Jun 15, 2023 10:45 AM
Sample Description	Ground Water
Location	GW5 : พื้นที่สีเขียวด้านทิศตะวันออกเฉียงเหนือของโครงการ
Date Analysis Commenced	Jun 15, 2023
Condition of Sample	Contained in two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Microbiological Testing</b>							
<i>Escherichia coli</i>	MPN/100mL	-	-	<1.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B, F	Bangkok
<b>Water Testing</b>							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.30	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
Chloride as Cl *	mg/L	0.06	0.2	251	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4110 B	Bangkok
Color *	Color unit	-	5	<5	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 B	Rayong
Flow rate *	m3/s	-	-	0.000	No Standard	Flow meter	Rayong
Fluoride *	mg/L	-	0.2	0.9	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (C)	Rayong
Permanent Hardness as CaCO3 *	mg/L	-	1	184	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2320 B	Bangkok
pH at 25 degree C *		-	-	6.9	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Sulfate *	mg/L	0.6	2	18.3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-SO4 (E)	Rayong

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## Analysis / Test Report

**Client :** Rojana Industrial Park Public Co., Ltd.  
2034/115 26TH Fl. Italthai Towe, New Petchburi Road, Bangkapi, Huaykwang, Bangkok  
Thailand 10310  
**P/O :** RJN-LCB-011/66  
**Project Name :** Laemchabang  
**Project Location :**

**TESTING**  
No.0009

**Lot ID: 2358113**

Date Received : Jun 15, 2023  
Date Reported : Jun 26, 2023  
Report Number : 2657097-1

Page 4 of 8

<b>Sample Number</b>	2358113-5
<b>Sampled Date</b>	Jun 15, 2023 10:45 AM
<b>Sample Description</b>	Ground Water
<b>Location</b>	GW5 : พื้นที่สีเขียวด้านทิศตะวันออกเฉียงเหนือของโครงการ
<b>Date Analysis Commenced</b>	Jun 15, 2023
<b>Condition of Sample</b>	Contained in two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
Total Alkalinity as CaCO <sub>3</sub> *	mg/L	-	1	213	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2320 B	Bangkok
Total Dissolved solids Dried at 180 degree C *	mg/L	-	5	740	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Bangkok
Total Hardness as CaCO <sub>3</sub> *	mg/L	-	1	396	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2340 C, 2340 C	Bangkok
Turbidity *	NTU	-	0.1	0.7	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

**Guideline :** Notification of the National Environmental Board, No. 20, B.E.2543

**Sampling By :** Pathompong Kornasawat

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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## Analysis / Test Report

Client : Rojana Industrial Park Public Co., Ltd.

2034/115 26TH Fl. Italthai Towe, New Petchburi Road, Bangkok, Huaykwang, Bangkok  
Thailand 10310

P/O : RJN-LCB-011/66

Project Name : Laemchabang

Project Location :

TESTING

No.0009

Lot ID: 2358113

Date Received : Jun 15, 2023

Date Reported : Jun 26, 2023

Report Number : 2657097-1

Page 5 of 8

Sample Number	2358113-6
Sampled Date	Jun 15, 2023 12:30 PM
Sample Description	Ground Water
Location	GW6 : พื้นที่สีเขียวด้านทิศตะวันตกเฉียงใต้ของโครงการ
Date Analysis Commenced	Jun 15, 2023
Condition of Sample	Contained in two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Metals Testing</b>							
Aluminium	mg/L	0.003	0.005	22.5	No Standard	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	0.006	≤0.01	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	1.93	No Standard	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	<0.0005	≤0.003	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	0.16	No Standard	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	0.009	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3500-Cr B	Bangkok
Iron	mg/L	0.003	0.005	8.56	No Standard	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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## Analysis / Test Report

Client : Rojana Industrial Park Public Co., Ltd.

2034/115 26TH Fl. Italthai Towe, New Petchburi Road, Bangkapi, Huaykwang, Bangkok  
Thailand 10310

P/O : RJN-LCB-011/66

Project Name : Laemchabang

Project Location :

TESTING

No.0009

Lot ID: 2358113

Date Received : Jun 15, 2023

Date Reported : Jun 26, 2023

Report Number : 2657097-1

Page 6 of 8

Sample Number	2358113-6
Sampled Date	Jun 15, 2023 12:30 PM
Sample Description	Ground Water
Location	GW6 : พื้นที่สีเขียวด้านทิศตะวันตกเฉียงใต้ของโครงการ
Date Analysis Commenced	Jun 15, 2023
Condition of Sample	Contained in two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Metals Testing</b>							
Lead	mg/L	0.0003	0.0005	0.02	≤0.01	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	0.72	≤0.5	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	<0.0005	≤0.001	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Nickel	mg/L	0.0003	0.0005	0.01	≤0.02	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 3125 B, 3030 F	Bangkok
Selenium	mg/L	0.0003	0.0005	<0.0005	≤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	No Standard	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	0.10	≤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

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## Analysis / Test Report

**Client :** Rojana Industrial Park Public Co., Ltd.

2034/115 26TH Fl. Italthai Towe, New Petchburi Road, Bangkok, Huaykwang, Bangkok  
Thailand 10310

**P/O :** RJN-LCB-011/66

**Project Name :** Laemchabang

**Project Location :**

**TESTING**

**No.0009**

**Lot ID: 2358113**

Date Received : Jun 15, 2023

Date Reported : Jun 26, 2023

Report Number : 2657097-1

Page 7 of 8

<b>Sample Number</b>	2358113-6						
<b>Sampled Date</b>	Jun 15, 2023 12:30 PM						
<b>Sample Description</b>	Ground Water						
<b>Location</b>	GW6 : พื้นที่สีเขียวด้านทิศตะวันตกเฉียงใต้ของโครงการ						
<b>Date Analysis Commenced</b>	Jun 15, 2023						
<b>Condition of Sample</b>	Contained in two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Microbiological Testing</b>							
<i>Escherichia coli</i>	MPN/100mL	-	-	<1.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 9221 B, F	Bangkok
<b>Water Testing</b>							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.24	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-NH3 (D)	Rayong
Chloride as Cl *	mg/L	0.06	0.2	89.4	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4110 B	Bangkok
Color *	Color unit	-	5	<5	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2120 B	Rayong
Flow rate *	m3/s	-	-	0.000	No Standard	Flow meter	Rayong
Fluoride *	mg/L	-	0.2	1.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-F (C)	Rayong
Permanent Hardness as CaCO3 *	mg/L	-	1	<1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2320 B	Bangkok
pH at 25 degree C *		-	-	7.2	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500 - H (B)	Rayong
Sulfate *	mg/L	0.6	2	199	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 4500-SO4 (E)	Rayong

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*Savitree N.*

Savitree Noisangiam  
Manager



## Analysis / Test Report

**Client :** Rojana Industrial Park Public Co., Ltd.  
2034/115 26TH Fl. Italthai Towe, New Petchburi Road, Bangkapi, Huaykwang, Bangkok  
Thailand 10310  
**P/O :** RJN-LCB-011/66  
**Project Name :** Laemchabang  
**Project Location :**

**TESTING**  
**No.0009**  
**Lot ID: 2358113**  
Date Received : Jun 15, 2023  
Date Reported : Jun 26, 2023  
Report Number : 2657097-1

Page 8 of 8

<b>Sample Number</b>	2358113-6
<b>Sampled Date</b>	Jun 15, 2023 12:30 PM
<b>Sample Description</b>	Ground Water
<b>Location</b>	GW6 : พื้นที่สีเขียวด้านทิศตะวันตกเฉียงใต้ของโครงการ
<b>Date Analysis Commenced</b>	Jun 15, 2023
<b>Condition of Sample</b>	Contained in two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Water Testing</b>							
Total Alkalinity as CaCO <sub>3</sub> *	mg/L	-	1	258	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2320 B	Bangkok
Total Dissolved solids Dried at 180 degree C *	mg/L	-	5	652	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 C	Bangkok
Total Hardness as CaCO <sub>3</sub> *	mg/L	-	1	241	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2340 C, 2340 C	Bangkok
Turbidity *	NTU	-	0.1	2100	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2130 B	Rayong

**Guideline :** Notification of the National Environmental Board, No. 20, B.E.2543

**Sampling By :** Pathompong Kornasawat

**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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ผลการตรวจวิเคราะห์นิเวศวิทยาทางน้ำ





สถานีวิจัยประมงศรีราชา  
101/12 หมู่ 9 ต. บางพระ  
อ. ศรีราชา จ. ชลบุรี 20110  
โทร./โทรสาร. (038) 311379

Client : Rojana Industrial Park Public Co., Ltd.

Address : 2034/115 26TH Fl. ItalThai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok,  
Thailand, 10310

Project Name : Laemchabang

รายงานผลการวิเคราะห์แพลงก์ตอนพืช

ตาราง ผลการวิเคราะห์แพลงก์ตอนพืช (เก็บตัวอย่างวันที่ 14 มิถุนายน 2566)

ชนิดแพลงก์ตอนพืช	ปริมาณแพลงก์ตอนพืช (หน่วยต่อลูกบาศก์เมตร)			
	2358129-1	2358129-2	2358129-3	2358129-5
Division Cyanophyta				
Class Cyanophyceae				
Order Chroococcales				
Family Chroococcaceae				
1. <i>Merismopedia convoluta</i>	-	499,000	181,000	-
2. <i>Microcystis aeruginosa</i>	-	-	19,000	-
3. <i>Coelosphaerium naegelianum</i>	-	-	57,000	-
Order Nostocales				
Family Oscillatoriaceae				
4. <i>Oscillatoria anguina</i>	-	-	190,000	-
5. <i>Oscillatoria anguina</i>	110,000	77,000	-	-
6. <i>Oscillatoria lutea</i>	221,000	530,000	-	-
7. <i>Oscillatoria planctonica</i>	-	-	-	26,000
8. <i>Oscillatoria princeps</i>	175,000	19,000	152,000	-

**ตาราง ผลการวิเคราะห์แฟลงก์ตอนพืช** (เก็บตัวอย่างวันที่ 14 มิถุนายน 2566)

(ต่อ)

ชนิดแฟลงก์ตอนพืช	ปริมาณแฟลงก์ตอนพืช (หน่วยต่อลูกบาศก์เมตร)			
	2358129-1	2358129-2	2358129-3	2358129-5
9. <i>Oscillatoria</i> sp.	258,000	307,000	342,000	479,000
10. <i>Oscillatoria splendida</i>	-	38,000	-	-
11. <i>Oscillatoria tenuis</i>	64,000	154,000	29,000	-
<b>Family Nostocaceae</b>				
12. <i>Anabaena azollae</i>	-	38,000	-	-
13. <i>Anabaena</i> sp.	37,000	-	-	-
<b>Family Rivulariaceae</b>				
14. <i>Calothrix parietana</i>	28,000	29,000	-	-
<b>Division Chlorophyta</b>				
<b>Class Chlorophyceae</b>				
<b>Order Volvocales</b>				
<b>Family Volvocaceae</b>				
15. <i>Pandorina morum</i>	9,000	-	-	410,000
<b>Order Chlorococcales</b>				
<b>Family Hydrodictyaceae</b>				
16. <i>Pediastrum duplex</i>	-	29,000	10,000	26,000
<b>Family Scenedesmaceae</b>				
17. <i>Scenedesmus armatus</i>	-	-	-	9,000
18. <i>Scenedesmus dimorphus</i>	-	-	114,000	-
19. <i>Scenedesmus opoliensis</i>	-	-	29,000	17,000
20. <i>Scenedesmus</i> sp.	-	-	-	64,000
<b>Order Ulotrichales</b>				
<b>Family Ulotrichaceae</b>				
21. <i>Geminella</i> sp.	-	-	10,000	-
<b>Order Zygomatales</b>				
<b>Family Zygnemataceae</b>				
22. <i>Zygnema</i> sp.	18,000	-	-	-

**ตาราง ผลการวิเคราะห์แพลงก์ตอนพืช** (เก็บตัวอย่างวันที่ 14 มิถุนายน 2566)

(ต่อ)

ชนิดแพลงก์ตอนพืช	ปริมาณแพลงก์ตอนพืช (หน่วยต่อลูกบาศก์เมตร)			
	2358129-1	2358129-2	2358129-3	2358129-5
<b>Family Desmidiaceae</b>				
23. <i>Closterium acerosum</i>	-	77,000	-	-
24. <i>Closterium ehrenbergii</i>	-	125,000	-	-
25. <i>Closterium lineatum</i>	-	86,000	-	-
26. <i>Cosmarium nudum</i>	9,000	19,000	-	-
27. <i>Euastrum sinuosum</i>	-	10,000	-	-
28. <i>Euastrum turgidum</i>	18,000	-	-	-
29. <i>Staurastrum gracile</i>	37,000	-	-	-
30. <i>Staurastrum limnesticum</i>	74,000	-	-	-
<b>Class Euglenophyceae</b>				
<b>Order Euglenales</b>				
<b>Family Euglenaceae</b>				
31. <i>Euglena acus</i>	18,000	-	10,000	9,000
32. <i>Euglena oxyuris</i>	46,000	38,000	-	-
33. <i>Euglena viridis</i>	-	10,000	-	9,000
34. <i>Lepocinclis ovum</i>	28,000	19,000	29,000	239,000
35. <i>Phacus hamatus</i>	37,000	19,000	-	-
36. <i>Phacus helikoides</i>	-	-	10,000	-
37. <i>Phacus longicauda</i>	-	58,000	38,000	9,000
38. <i>Phacus myersi</i>	28,000	-	19,000	-
39. <i>Phacus platalea</i>	-	10,000	29,000	-
40. <i>Phacus ranula</i>	147,000	86,000	-	-
41. <i>Phacus</i> sp.	110,000	-	124,000	9,000
42. <i>Phacus torta</i>	-	-	29,000	-
43. <i>Strombomonas</i> sp.	28,000	-	-	-
44. <i>Trachelomonas crebea</i>	-	19,000	-	103,000
45. <i>Trachelomonas daugerdiana</i>	9,000	-	-	-
46. <i>Trachelomonas hispida</i>	28,000	29,000	-	-



ตาราง ผลการวิเคราะห์แพลงก์ตอนพืช (เก็บตัวอย่างวันที่ 14 มิถุนายน 2566)

(ต่อ)

ชนิดแพลงก์ตอนพืช	ปริมาณแพลงก์ตอนพืช (หน่วยต่อลูกบาศก์เมตร)			
	2358129-1	2358129-2	2358129-3	2358129-5
<b>Division Chromophyta</b>				
<b>Class Bacillariophyceae</b>				
<b>Order Biddulphiales</b>				
<b>Suborder Coscinodiscineae</b>				
<b>Family Thalassiosiraceae</b>				
47. <i>Cyclotella stelligera</i>	-	-	-	376,000
<b>Order Bacillariales</b>				
<b>Suborder Fragilariineae</b>				
<b>Family Fragilariaceae</b>				
48. <i>Fragilaria capucina</i>	184,000	192,000	380,000	-
49. <i>Synedra acus</i>	9,000	-	-	-
50. <i>Synedra ulna</i>	1,509,000	125,000	48,000	-
<b>Family Tabellariaceae</b>				
51. <i>Tabellaria fenestrata</i>	28,000	19,000	-	-
<b>Suborder Bacillariineae</b>				
<b>Family Eunotiaceae</b>				
52. <i>Eunotia lineolata</i>	-	-	10,000	9,000
53. <i>Eunotia pectinalis</i>	46,000	77,000	76,000	-
<b>Family Cymbellaceae</b>				
54. <i>Cymbella</i> sp.	18,000	-	-	-
55. <i>Gomphonema parvulum</i>	9,000	225,000	67,000	-
<b>Family Naviculaceae</b>				
56. <i>Amphora ovalis</i>	-	19,000	48,000	-
57. <i>Amphora</i> sp.	-	48,000	-	-
58. <i>Gyrosigma attenuatum</i>	-	-	-	34,000
59. <i>Navicula anglica</i>	9,000	-	418,000	-
60. <i>Navicula cuspidata</i>	-	-	10,000	17,000

**ตาราง ผลการวิเคราะห์แพลงก์ตอนพืช** (เก็บตัวอย่างวันที่ 14 มิถุนายน 2566)

(ต่อ)

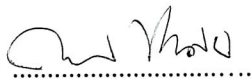
ชนิดแพลงก์ตอนพืช	ปริมาณแพลงก์ตอนพืช (หน่วยต่อลูกบาศก์เมตร)			
	2358129-1	2358129-2	2358129-3	2358129-5
61. <i>Navicula</i> sp.	37,000	115,000	228,000	-
62. <i>Pinnularia acrosphaeria</i>	-	-	67,000	-
63. <i>Pinnularia braunii</i>	18,000	-	162,000	-
64. <i>Pinnularia gibba</i>	37,000	26,000	314,000	-
<b>Family Bacillariaceae</b>				
65. <i>Nitzschia bilobata</i>	-	-	10,000	-
66. <i>Nitzschia sigmoidea</i>	-	10,000	-	-
67. <i>Tryblionella</i> sp.	-	67,000	-	-
<b>Family Rhopalodiaceae</b>				
68. <i>Epithemia argus</i>	-	10,000	-	26,000
69. <i>Rhopalodia gibba</i>	18,000	-	-	-
<b>Family Surirellaceae</b>				
70. <i>Surirella elegans</i>	-	29,000	48,000	-
71. <i>Surirella elegans</i>	-	-	-	-
72. <i>Surirella robusta</i>	9,000	48,000	-	-
<b>Class Dinophyceae</b>				
<b>Order Peridinales</b>				
<b>Family Peridiniaceae</b>				
73. <i>Peridinium</i> sp.	-	-	-	1,778,000
<b>ชนิดแพลงก์ตอนพืช</b>	<b>36</b>	<b>38</b>	<b>33</b>	<b>19</b>
<b>ปริมาณแพลงก์ตอนพืช</b>	<b>3,468,000</b>	<b>3,335,000</b>	<b>3,307,000</b>	<b>3,649,000</b>
<b>ดัชนีความหลากหลายแพลงก์ตอนพืช</b>	<b>2.4083</b>	<b>3.0164</b>	<b>2.9444</b>	<b>1.7349</b>
<b>ดัชนีความสม่ำเสมอแพลงก์ตอนพืช</b>	<b>0.6720</b>	<b>0.8292</b>	<b>0.8421</b>	<b>0.5892</b>

**Sample Location :**

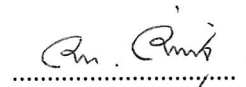
1. สถานี 2358129-1 : สถานี B1 : ห้วยมาบบริเวณต้นน้ำเมื่อเทียบกับจุดปล่อยน้ำทิ้งของโครงการประมาณ 1,320 เมตร
2. สถานี 2358129-2 : สถานี B2 : ห้วยมาบบริเวณจุดปล่อยน้ำทิ้งของโครงการ

3. สถานี 2358129-3 : สถานี B3 : ห้วยมาบบริเวณท้ายน้ำ เมื่อเทียบกับจุดปล่อยน้ำทิ้ง  
ของโครงการประมาณ 675 เมตร
4. สถานี 2358129-5 : สถานี B5 : ห้วยอีตุตบริเวณท้ายน้ำเมื่อเทียบกับที่ตั้งโครงการ  
ประมาณ 400 เมตร

**Condition of Sample :** contained in one plastic bottle, sample containers comply to pretreatment-preservation standards (APHA, USEPA)



(นางสาวกนกวรรณ ขาวค้อน)  
ผู้วิเคราะห์



(นายอลงกต อินทรชาติ)  
หัวหน้าสถานีวิจัยประมงศรีราชา





สถานีวิจัยประมงศรีราชา  
101/12 หมู่ 9 ต. บางพระ  
อ. ศรีราชา จ. ชลบุรี 20110  
โทร./โทรสาร. (038) 311379

Client : Rojana Industrial Park Public Co., Ltd.

Address : 2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok,  
Thailand, 10310

Project Name : Laemchabang

รายงานผลการวิเคราะห์แหล่งกักต่อน้ำ

ตาราง ผลการวิเคราะห์แหล่งกักต่อน้ำ (เก็บตัวอย่างวันที่ 14 มิถุนายน 2566)

ชนิดแหล่งกักต่อน้ำ	ปริมาณแหล่งกักต่อน้ำ (หน่วยต่อลูกบาศก์เมตร)			
	2358129-1	2358129-2	2358129-3	2358129-5
Phylum Protozoa				
Subphylum Plasmodroma				
Class Sarcodina				
Subclass Rhizopoda				
Order Testacida				
Family Arcellidae				
1. <i>Arcella</i> sp.	110,000	10,000	29,000	-
2. <i>Arcella vulgaris</i>	488,000	29,000	105,000	-
Family Diffugiidae				
3. <i>Centropyxis aculeata</i>	-	-	10,000	-
4. <i>Diffugia lobostoma</i>	18,000	-	-	-
Family Euglyphidae				
5. <i>Euglypha acanthophora</i>	-	-	19,000	-
6. <i>Euglypha</i> sp.	18,000	10,000	29,000	9,000

ตาราง ผลการวิเคราะห์แพลงก์ตอนสัตว์ (เก็บตัวอย่างวันที่ 14 มิถุนายน 2566)

(ต่อ)

ชนิดแพลงก์ตอนสัตว์	ปริมาณแพลงก์ตอนสัตว์ (หน่วยต่อลูกบาศก์เมตร)			
	2358129-1	2358129-2	2358129-3	2358129-5
<b>Family Notommatidae</b>				
22. <i>Cephalodella gibba</i>	9,000	10,000	10,000	-
23. <i>Monommata longiseta</i>	9,000	-	-	-
<b>Family Asplanchnidae</b>				
24. <i>Asplanchna priodonta</i>	-	48,000	57,000	-
<b>Family Synchaetidae</b>				
25. <i>Polyarthra dolichoptera</i>	-	38,000	-	855,000
26. <i>Polyarthra vulgaris</i>	-	-	10,000	1,881,000
27. <i>Synchaeta oblonga</i>	9,000	-	-	-
<b>Order Flosculariacea</b>				
<b>Family Flosculariidae</b>				
28. <i>Ptygura</i> sp.	9,000	10,000	-	-
<b>Class Digononta</b>				
<b>Family Philodinidae</b>				
29. <i>Philodina</i> sp.	28,000	-	-	-
30. <i>Rotaria rotatoria</i>	18,000	-	67,000	-
<b>Phylum Arthropoda</b>				
<b>Class Crustacea</b>				
<b>Subclass Branchiopoda</b>				
<b>Order Diplostraca</b>				
<b>Suborder Cladocera</b>				
<b>Family Bosminidae</b>				
31. <i>Bosminopsis deitersi</i>	-	-	10,000	-
<b>Family Chydoridae</b>				
32. <i>Chydorus</i> sp.	-	-	10,000	-

**ตาราง ผลการวิเคราะห์แพลงก์ตอนสัตว์** (เก็บตัวอย่างวันที่ 14 มิถุนายน 2566)

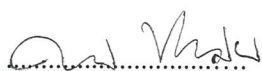
(ต่อ)

ชนิดแพลงก์ตอนสัตว์	ปริมาณแพลงก์ตอนสัตว์ (หน่วยต่อลูกบาศก์เมตร)			
	2358129-1	2358129-2	2358129-3	2358129-5
Subclass Ostracoda				
Order Podocopa				
Family Cypridae				
33. <i>Cypridopsis</i> sp.	9,000	-	-	-
Subclass Copepoda				
34. Copepod nauplius	74,000	19,000	38,000	154,000
Order Cyclopoida				
35. Cyclopoid copepod	9,000	-	-	9,000
ชนิดแพลงก์ตอนสัตว์	25	13	16	7
ปริมาณแพลงก์ตอนสัตว์	1,295,000	224,000	898,000	2,934,000
ดัชนีความหลากหลายแพลงก์ตอนสัตว์	2.3717	2.3542	1.9698	0.8821
ดัชนีความสม่ำเสมอแพลงก์ตอนสัตว์	0.7368	0.9178	0.7105	0.4533

**Sample Location :**

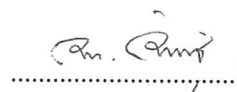
- สถานี 2358129-1 : สถานี B1 : ห้วยมาบบริเวณต้นน้ำเมื่อเทียบกับจุดปล่อยน้ำทิ้งของโครงการประมาณ 1,320 เมตร
- สถานี 2358129-2 : สถานี B2 : ห้วยมาบบริเวณจุดปล่อยน้ำทิ้งของโครงการ
- สถานี 2358129-3 : สถานี B3 : ห้วยมาบบริเวณท้ายน้ำ เมื่อเทียบกับจุดปล่อยน้ำทิ้งของโครงการประมาณ 675 เมตร
- สถานี 2358129-5 : สถานี B5 : ห้วยอีคุตบริเวณท้ายน้ำเมื่อเทียบกับที่ตั้งโครงการประมาณ 400 เมตร

**Condition of Sample :** contained in one plastic bottle, sample containers comply to pretreatment preservation standards (APHA, USEPA)



(นางสาวกนกวรรณ ขาวค้อน)

ผู้วิเคราะห์



(นายอลงกต อินทรชาติ)

หัวหน้าสถานีวิจัยประมงศรีราชา





สถานีวิจัยประมงศรีราชา  
101/12 หมู่ 9 ต. บางพระ  
อ. ศรีราชา จ. ชลบุรี 20110  
โทร./โทรสาร. (038) 311379

Client : Rojana Industrial Park Public Co., Ltd.

Address : 2034/115 26TH Fl. ItalThai Tower, New Petchburi Road, Bangkapi, Huaykwang, Bangkok,  
Thailand, 10310

Project Name : Laemchabang

รายงานผลการวิเคราะห์สัตว์หน้าดิน

ตาราง ผลการวิเคราะห์สัตว์หน้าดิน (เก็บตัวอย่างวันที่ 14 มิถุนายน 2566)

ชนิดสัตว์หน้าดิน	ปริมาณสัตว์หน้าดิน (ตัวต่อตารางเมตร)			
	2358200-1	2358200-2	2358200-3	2358200-5
Phylum Annelida Class Clitellata Order Tubificida Family Naididae <i>Branchiura</i> sp. (ไส้เดือนน้ำ)	89	-	89	30
Phylum Arthropoda Class Insecta Order Diptera Family Chironomidae <i>Chironomus</i> sp. (หนอนแดง)	30	163	4,223	15
Class Malacostraca Order Decapoda Family Parathelphusidae <i>Somanniathelphusa</i> sp. (ปูชนิดหนึ่ง)	-	-	15	-

**ตาราง ผลการวิเคราะห์สัตว์หน้าดิน** (เก็บตัวอย่างวันที่ 14 มิถุนายน 2566)

(ต่อ)

ชนิดสัตว์หน้าดิน	ปริมาณสัตว์หน้าดิน (ตัวต่อตารางเมตร)			
	2358200-1	2358200-2	2358200-3	2358200-5
<b>Phylum Mollusca</b>				
<b>Class Gastropoda</b>				
<b>Order Architaenioglossa</b>				
<b>Family Thiariidae</b>				
<i>Melanoides</i> sp. (หอยเจดีย์)	15	-	75	-
<i>Tarebia</i> sp. (หอยเจดีย์)	-	-	-	312
<b>Order Neogastropoda</b>				
<b>Family Buccinidae</b>				
<i>Clea</i> sp. (หอยเจดีย์)	-	-	15	-
<b>ชนิดสัตว์หน้าดิน</b>	<b>3</b>	<b>1</b>	<b>5</b>	<b>3</b>
<b>ปริมาณสัตว์หน้าดิน</b>	<b>134</b>	<b>163</b>	<b>4,417</b>	<b>357</b>
<b>ค่าดัชนีความหลากหลายสัตว์หน้าดิน</b>	<b>0.8520</b>	<b>0.0000</b>	<b>0.2294</b>	<b>0.4590</b>

- Sample Location :**
- สถานี 2358200-1 : B1 : ห้วยมาบบริเวณต้นน้ำเมื่อเทียบกับจุดปล่อยน้ำทิ้งของโครงการประมาณ 1,320 เมตร
  - สถานี 2358200-2 : B2 : ห้วยมาบบริเวณจุดปล่อยน้ำทิ้งของโครงการ
  - สถานี 2358200-3 : B3 : ห้วยมาบบริเวณท้ายน้ำเมื่อเทียบกับจุดปล่อยน้ำทิ้งของโครงการประมาณ 675 เมตร
  - สถานี 2358200-5 : B5 : ห้วยอิศุดบริเวณท้ายน้ำเมื่อเทียบกับที่ตั้งโครงการประมาณ 400 เมตร

**Condition of Sample :** contained in one plastic zip bag

.....  
 (นายอรรถวุฒิ กันทะวงศ์)  
 ผู้วิเคราะห์

.....  
 (นายอลงกต อินทราชา)  
 หัวหน้าสถานีวิจัยประมงศรีราชา



สถานีวิจัยประมงศรีราชา

101/12 หมู่ 9 ต. บางพระ อ. ศรีราชา จ. ชลบุรี 20110

โทร./โทรสาร. (038) 311379

Client : Rojana Industrial Park Public Co., Ltd.

Address : 2034/115 26TH Fl. Italthai Tower, New Petchburi Road, Bangkok, Huaykwang, Bangkok, Thailand, 10310

Project Name : Laemchabang

### รายงานผลการวิเคราะห์สัตว์น้ำ

ตาราง ผลการวิเคราะห์สัตว์น้ำ (Aquatic animal) (เก็บตัวอย่างเมื่อวันที่ 14 มิถุนายน 2566)

ชนิดสัตว์น้ำ	ปริมาณสัตว์น้ำ (ตัวต่อตารางเมตร)				ช่วงขนาด (ซม.)	น้ำหนักรวม (กรัม)
	2358129-1	2358129-2	2358129-3	2358129-5		
Phylum Chordata						
Class Actinopterygii						
Order Anabantiformes						
Family Osphronemidae						
Trichopodus trichopterus (ปลากะตักหม้อ)	2	5	5	2	4.00-10.00	54.00



ตาราง ผลการวิเคราะห์สัตว์น้ำ (Aquatic animal) (เก็บตัวอย่างเมื่อวันที่ 14 มิถุนายน 2566) (ต่อ)

ชนิดสัตว์น้ำ	ปริมาณสัตว์น้ำ (ตัวต่อตารางเมตร)				ช่วงขนาด	น้ำหนักรวม
	2358129-1	2358129-2	2358129-3	2358129-5	(ซม.)	(กรัม)
<b>Order Cichliformes</b>						
<b>Family Cichlidae</b>						
<i>Oreochromis niloticus</i> (ปลานิล)	1	-	-	-	6.80	6.00
<b>Order Cypriniformes</b>						
<b>Family Cyprinidae</b>						
<i>Esomus metallicus</i> (ปลาชีวนวดยาว)	5	-	-	3	6.00-8.00	28.00
<i>Puntius brevis</i> (ปลาคะเพียนทราย)	6	3	2	4	5.40-8.70	67.00
<i>Rasbora paviana</i> (ปลาชีวกวยแถบดำ)	2	-	-	3	6.30-7.20	18.00
<b>ชนิดสัตว์น้ำ</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>4.00-10.00</b>	<b>173.00</b>
<b>ปริมาณสัตว์น้ำ</b>	<b>16</b>	<b>8</b>	<b>7</b>	<b>12</b>		
<b>ดัชนีความหลากหลายสัตว์น้ำ</b>	<b>1.4244</b>	<b>0.6616</b>	<b>0.5983</b>	<b>1.3580</b>		

- Sample Location :**
1. สถานี 2358129-1 : B1 : ห้วยมาบบริเวณต้นน้ำเมื่อเทียบกับจุดปล่อยน้ำทิ้งของโครงการประมาณ 1,320 เมตร
  2. สถานี 2358129-2 : B2 : ห้วยมาบบริเวณจุดปล่อยน้ำทิ้งของโครงการ
  3. สถานี 2358129-3 : B3 : ห้วยมาบบริเวณท้ายน้ำเมื่อเทียบกับจุดปล่อยน้ำทิ้งของโครงการประมาณ 675 เมตร
  4. สถานี 2358129-5 : B5 : ห้วยอีคุบบริเวณท้ายน้ำเมื่อเทียบกับที่ตั้งโครงการประมาณ 400 เมตร

ภาคผนวก ค-6

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ผลการตรวจวิเคราะห์โลหะหนักในตะกอนดินใต้ท้องน้ำ





## Analysis / Test Report

**Client :** Rojana Industrial Park Public Co., Ltd.

2034/115 26TH Fl. Italthai Towe, New Petchburi Road, Bangkapi, Huaykwang, Bangkok  
Thailand 10310

**P/O :** RJN-LCB-011/66

**Project Name :** Laemchabang

**Project Location :**

**Lot ID: 2358204**

Date Received : Jun 14, 2023

Date Reported : Jun 24, 2023

Report Number : 2657440-1

Page 1 of 8

<b>Sample Number</b>	2358204-1						
<b>Sampled Date</b>	Jun 14, 2023 11:36 AM						
<b>Sample Description</b>	ตะกอนดินใต้ท้องน้ำ						
<b>Location</b>	SD1 : ห้วยมาบบริเวณต้นน้ำเมื่อเทียบกับจุดปล่อยน้ำทิ้งของโครงการประมาณ 1,320 เมตร						
<b>Date Analysis Commenced</b>	Jun 16, 2023						
<b>Condition of Sample</b>	Packed in one plastic bag and one glass bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Metals Testing</b>							
Arsenic	mg/kg	-	0.50	4.58	≤10	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Cadmium	mg/kg	-	0.50	<0.50	≤1	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Copper	mg/kg	-	1.00	1.20	≤31.5	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Hexavalent Chromium	mg/kg	-	1.00	<1.00	No Standard	United States Environmental Protection Agency, EPA Method 3060A and 7196A	Bangkok
Lead	mg/kg	-	1.00	5.38	≤36	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Manganese	mg/kg	-	1.00	76.0	No Standard	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Mercury	mg/kg	-	0.10	<0.10	≤0.2	United States Environmental Protection Agency, EPA Method 7473	Bangkok
Nickel	mg/kg	-	1.00	<1.00	≤23	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Silver	mg/kg	-	1.00	<1.00	No Standard	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Zinc	mg/kg	-	1.00	37.1	≤120	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
<b>Physical Parameters</b>							
Moisture	%	-	0.1	30.4	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 G	Bangkok

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*Chanatt L.*

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Thailand 10310

**P/O :** RJN-LCB-011/66

**Project Name :** Laemchabang

**Project Location :**

**Lot ID: 2358204**

Date Received : Jun 14, 2023

Date Reported : Jun 24, 2023

Report Number : 2657440-1

Page 2 of 8

**Guideline :** Notification of The National Environmental Board B.E.2565, for protect benthic animals

**Note :** Analysis Results expressed on dry basis.

**Sampling By :** Pattarapol Sawangjaitam

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Thailand 10310

**P/O :** RJN-LCB-011/66

**Project Name :** Laemchabang

**Project Location :**

**Lot ID: 2358204**

Date Received : Jun 14, 2023

Date Reported : Jun 24, 2023

Report Number : 2657440-1

Page 3 of 8

<b>Sample Number</b>	2358204-2						
<b>Sampled Date</b>	Jun 14, 2023 11:10 AM						
<b>Sample Description</b>	ตะกอนดินใต้ท้องน้ำ						
<b>Location</b>	SD2 : ห้วยมาบบริเวณจุดปล่อยน้ำทิ้งของโครงการ						
<b>Date Analysis Commenced</b>	Jun 16, 2023						
<b>Condition of Sample</b>	Packed in one plastic bag and one glass bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Metals Testing</b>							
Arsenic	mg/kg	-	0.50	2.02	≤10	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Cadmium	mg/kg	-	0.50	<0.50	≤1	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Copper	mg/kg	-	1.00	<1.00	≤31.5	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Hexavalent Chromium	mg/kg	-	1.00	<1.00	No Standard	United States Environmental Protection Agency, EPA Method 3060A and 7196A	Bangkok
Lead	mg/kg	-	1.00	1.52	≤36	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Manganese	mg/kg	-	1.00	73.9	No Standard	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Mercury	mg/kg	-	0.10	<0.10	≤0.2	United States Environmental Protection Agency, EPA Method 7473	Bangkok
Nickel	mg/kg	-	1.00	<1.00	≤23	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Silver	mg/kg	-	1.00	<1.00	No Standard	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Zinc	mg/kg	-	1.00	7.50	≤120	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
<b>Physical Parameters</b>							
Moisture	%	-	0.1	13.2	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 G	Bangkok

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## Analysis / Test Report

**Client :** Rojana Industrial Park Public Co., Ltd.

2034/115 26TH Fl. Italthai Towe, New Petchburi Road, Bangkapi, Huaykwang, Bangkok  
Thailand 10310

**P/O :** RJN-LCB-011/66

**Project Name :** Laemchabang

**Project Location :**

**Lot ID: 2358204**

Date Received : Jun 14, 2023

Date Reported : Jun 24, 2023

Report Number : 2657440-1

Page 4 of 8

**Guideline :** Notification of The National Environmental Board B.E.2565, for protect benthic animals

**Note :** Analysis Results expressed on dry basis.

**Sampling By :** Pattarapol Sawangjaitam

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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Thailand 10310

**P/O :** RJN-LCB-011/66

**Project Name :** Laemchabang

**Project Location :**

**Lot ID: 2358204**

Date Received : Jun 14, 2023

Date Reported : Jun 24, 2023

Report Number : 2657440-1

Page 5 of 8

<b>Sample Number</b>	2358204-3
<b>Sampled Date</b>	Jun 14, 2023 10:45 AM
<b>Sample Description</b>	ตะกอนดินใต้ท้องน้ำ
<b>Location</b>	SD3 : ห้วยมาบบริเวณท้ายน้ำเมื่อเทียบกับจุดปล่อยน้ำทิ้งของโครงการประมาณ 675 เมตร
<b>Date Analysis Commenced</b>	Jun 16, 2023
<b>Condition of Sample</b>	Packed in one plastic bag and one glass bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Metals Testing</b>							
Arsenic	mg/kg	-	0.50	0.99	≤10	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Cadmium	mg/kg	-	0.50	<0.50	≤1	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Copper	mg/kg	-	1.00	<1.00	≤31.5	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Hexavalent Chromium	mg/kg	-	1.00	<1.00	No Standard	United States Environmental Protection Agency, EPA Method 3060A and 7196A	Bangkok
Lead	mg/kg	-	1.00	2.05	≤36	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Manganese	mg/kg	-	1.00	6.04	No Standard	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Mercury	mg/kg	-	0.10	<0.10	≤0.2	United States Environmental Protection Agency, EPA Method 7473	Bangkok
Nickel	mg/kg	-	1.00	<1.00	≤23	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Silver	mg/kg	-	1.00	<1.00	No Standard	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Zinc	mg/kg	-	1.00	1.51	≤120	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
<b>Physical Parameters</b>							
Moisture	%	-	0.1	16.3	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 G	Bangkok

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## Analysis / Test Report

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Thailand 10310

**P/O :** RJN-LCB-011/66

**Project Name :** Laemchabang

**Project Location :**

**Lot ID: 2358204**

Date Received : Jun 14, 2023

Date Reported : Jun 24, 2023

Report Number : 2657440-1

Page 6 of 8

**Guideline :** Notification of The National Environmental Board B.E.2565, for protect benthic animals

**Note :** Analysis Results expressed on dry basis.

**Sampling By :** Pattarapol Sawangjaitam

**Remark :**

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)

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## Analysis / Test Report

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2034/115 26TH Fl. Italhai Towe, New Petchburi Road, Bangkapi, Huaykwang, Bangkok  
Thailand 10310  
**P/O :** RJN-LCB-011/66  
**Project Name :** Laemchabang  
**Project Location :**

**Lot ID: 2358204**

Date Received : Jun 14, 2023  
Date Reported : Jun 24, 2023  
Report Number : 2657440-1

Page 7 of 8

<b>Sample Number</b>	2358204-5						
<b>Sampled Date</b>	Jun 14, 2023 10:16 AM						
<b>Sample Description</b>	ตะกอนดินใต้ท้องน้ำ						
<b>Location</b>	SD5 : ห้วยอีศุดบริเวณท้ายน้ำเมื่อเทียบกับที่ตั้งโครงการประมาณ 400 เมตร						
<b>Date Analysis Commenced</b>	Jun 16, 2023						
<b>Condition of Sample</b>	Packed in one plastic bag and one glass bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
<b>Metals Testing</b>							
Arsenic	mg/kg	-	0.50	1.13	≤10	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Cadmium	mg/kg	-	0.50	<0.50	≤1	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Copper	mg/kg	-	1.00	1.59	≤31.5	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Hexavalent Chromium	mg/kg	-	1.00	<1.00	No Standard	United States Environmental Protection Agency, EPA Method 3060A and 7196A	Bangkok
Lead	mg/kg	-	1.00	5.20	≤36	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Manganese	mg/kg	-	1.00	47.4	No Standard	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Mercury	mg/kg	-	0.10	<0.10	≤0.2	United States Environmental Protection Agency, EPA Method 7473	Bangkok
Nickel	mg/kg	-	1.00	1.38	≤23	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Silver	mg/kg	-	1.00	<1.00	No Standard	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
Zinc	mg/kg	-	1.00	8.22	≤120	United States Environmental Protection Agency, EPA Method 3050B and 6010D	Bangkok
<b>Physical Parameters</b>							
Moisture	%	-	0.1	20.9	No Standard	In-house method based on Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 23rd ed., 2017, part 2540 G	Bangkok

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2034/115 26TH Fl. ItalThai Towe, New Petchburi Road, Bangkok, Huaykwang, Bangkok  
Thailand 10310

**P/O :** RJN-LCB-011/66

**Project Name :** Laemchabang

**Project Location:**

**Lot ID: 2358204**

Date Received : Jun 14, 2023

Date Reported : Jun 24, 2023

Report Number : 2657440-1

Page 8 of 8

**Guideline :** Notification of The National Environmental Board B.E.2565, for protect benthic animals

**Note :** Analysis Results expressed on dry basis.

**Sampling By :** Pattarapol Sawangjaitam

Remark :

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