

ภาคผนวก ค

ใบรับรองผลการตรวจวัดคุณภาพสิ่งแวดล้อม

ภาคผนวก ค-1

คุณภาพอากาศในบรรยากาศ



Analysis / Test Report



TESTING
No.0042

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1

Lot ID: 2513793

Date Received : Feb 24, 2025

Date Reported : Feb 28, 2025

Report Number: 3233913-2

Page 1 of 1

Sample Description Air Quality
Location เขตที่พัฒนาและพาณิชย์ในนิคมฯ 47P 726911E 1443649N
Date Analysis Commenced Feb 25, 2025
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag

Sample Number	Sampled Date	Total Suspended Particulate (mg/m3)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2513793-4	Feb 14 - Feb 15, 2025	0.099	754*	29.0*
2513793-5	Feb 15 - Feb 16, 2025	0.116	754*	29.0*
2513793-6	Feb 16 - Feb 17, 2025	0.077	754*	29.0*
Guideline		0.33	-	-

Reference Method

Total Suspended Particulate : United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008

Guideline : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

Sampled By : Anurak Tongkhajonsakda

Remark : Result (s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

Approved by

Scientist (4)

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

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Analysis / Test Report



TESTING
No.0042

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1

Lot ID: 2513793

Date Received : Feb 24, 2025

Date Reported : Feb 28, 2025

Report Number: 3233913-1

Page 1 of 1

Sample Description Air Quality
Location โรงเจียนบ่อวัน 47P 723898E 1443527N
Date Analysis Commenced Feb 25, 2025
Condition of Sample Drawn into one glass filter paper (8x10 inch) placed in plastic bag

Sample Number	Sampled Date	Total Suspended Particulate (mg/m3)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2513793-1	Feb 14 - Feb 15, 2025	0.117	754*	29.0*
2513793-2	Feb 15 - Feb 16, 2025	0.090	754*	29.0*
2513793-3	Feb 16 - Feb 17, 2025	0.089	754*	29.0*
Guideline		0.33	-	-

Reference Method

Total Suspended Particulate : United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008

Guideline : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

Sampled By : Anurak Tongkhajonsakda

Remark : Result (s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

Scientist (4)

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :
Project Name : Monitoring
Project Location : WHA CIE 1

Lot ID: 2513791
Date Received : Feb 24, 2025
Date Reported : Feb 25, 2025
Report Number: 3233916-1

Page 1 of 1

Sample Description Air Quality
Location โรงเก็บของ 47P 723898E 1443527N
Parameter Nitrogen dioxide (ppm)
Measurement Date Feb 14, 2025 - Feb 17, 2025
Measurement by Anurak Tongkhajonsakda

	2513791-1	2513791-2	2513791-3	-	-	-	-
Time	Feb 14, 2025	Feb 15, 2025	Feb 16, 2025	-	-	-	-
09:00 AM - 10:00 AM	0.0022	0.0027	0.0086	-	-	-	-
10:00 AM - 11:00 AM	0.0019	0.0040	0.0074	-	-	-	-
11:00 AM - 12:00 PM	0.0023	0.0041	0.0042	-	-	-	-
12:00 PM - 01:00 PM	0.0036	0.0055	0.0032	-	-	-	-
01:00 PM - 02:00 PM	0.0034	0.0126	0.0072	-	-	-	-
02:00 PM - 03:00 PM	0.0082	0.0126	0.0135	-	-	-	-
03:00 PM - 04:00 PM	0.0105	0.0161	0.0076	-	-	-	-
04:00 PM - 05:00 PM	0.0068	0.0110	0.0066	-	-	-	-
05:00 PM - 06:00 PM	0.0059	0.0052	0.0073	-	-	-	-
06:00 PM - 07:00 PM	0.0062	0.0041	0.0064	-	-	-	-
07:00 PM - 08:00 PM	0.0080	0.0054	0.0069	-	-	-	-
08:00 PM - 09:00 PM	0.0081	0.0053	0.0070	-	-	-	-
09:00 PM - 10:00 PM	0.0090	0.0090	0.0069	-	-	-	-
10:00 PM - 11:00 PM	0.0062	0.0073	0.0068	-	-	-	-
11:00 PM - 12:00 AM	0.0072	0.0057	0.0065	-	-	-	-
12:00 AM - 01:00 AM	0.0075	0.0057	0.0062	-	-	-	-
01:00 AM - 02:00 AM	0.0070	0.0055	0.0064	-	-	-	-
02:00 AM - 03:00 AM	0.0069	0.0069	0.0070	-	-	-	-
03:00 AM - 04:00 AM	0.0067	0.0070	0.0069	-	-	-	-
04:00 AM - 05:00 AM	0.0075	0.0069	0.0092	-	-	-	-
05:00 AM - 06:00 AM	0.0066	0.0029	0.0087	-	-	-	-
06:00 AM - 07:00 AM	0.0029	0.0078	0.0071	-	-	-	-
07:00 AM - 08:00 AM	0.0032	0.0080	0.0085	-	-	-	-
08:00 AM - 09:00 AM	0.0030	0.0081	0.0065	-	-	-	-
Average	0.0059	0.0071	0.0072	-	-	-	-
1hr - Maximum	0.0105	0.0161	0.0135	-	-	-	-
Standard 1hr - Average	0.170	0.170	0.170	-	-	-	-

Standard : Notification of the National Environment Board No. 33, 2009 (B.E. 2552).
Reference Method : US EPAMethod Part 50 App. F (Chemiluminescence)

Approved by

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Scientist (3)

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :
Project Name : Monitoring
Project Location : WHA CIE 1



TESTING
No.0042

Lot ID: 2513799
Date Received : Feb 24, 2025
Date Reported : Feb 28, 2025
Report Number: 3233920-1

Page 1 of 1

Sample Description Air Quality
Location โรงเก็บของ 47P 729638E 1447551N
Date Analysis Commenced Feb 25, 2025
Condition of Sample Drawn into ore glass filter paper (8x10 inch) placed in plastic bag and one quartz filter paper (8x10 inch) placed in plastic bag

Sample Number	Sampled Date	Total Suspended Particulate (mg/m3)	Particulate Matter (PM-10) (mg/m3)	Barometric Pressure (mm Hg)	Atmospheric Temperature (°C)
2513799-1	Feb 14 - Feb 15, 2025	0.136	0.079	754*	29.0*
2513799-2	Feb 15 - Feb 16, 2025	0.143	0.070	754*	29.0*
2513799-3	Feb 16 - Feb 17, 2025	0.088	0.041	754*	29.0*
Guideline		0.33	0.12	-	-

Reference Method

Total Suspended Particulate : United States Environmental Protection Agency 40 CFR, method 50, Appendix B, revised as of July 1, 2008
Particulate Matter (PM-10) : United States Environmental Protection Agency 40 CFR, method 50, Appendix J, revised as of July 1, 2008

Guideline : Notification of the National Environmental Board. No.24, 2004 (B.E.2547) dated September 22, 2004

Sampled By : Anurak Tongkhajonsakda

Remark : Result (s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :
Project Name : Monitoring
Project Location : WHA CIE 1

Lot ID: 2513797
Date Received : Feb 24, 2025
Date Reported : Feb 25, 2025
Report Number: 3233950-1

Page 1 of 1

Sample Description Air Quality
Location วัดพันเตลียงนอก 47P 729638E 1447551N
Parameter Nitrogen dioxide (ppm)
Measurement Date Feb 14, 2025 - Feb 17, 2025
Measurement by Anurak Tongkhajonsakda

Time	2513797-1 Feb 14, 2025	2513797-2 Feb 15, 2025	2513797-3 Feb 16, 2025	-	-	-	-
10:00 AM - 11:00 AM	0.0078	0.0116	0.0002	-	-	-	-
11:00 AM - 12:00 PM	0.0037	0.0094	0.0031	-	-	-	-
12:00 PM - 01:00 PM	0.0019	0.0128	0.0111	-	-	-	-
01:00 PM - 02:00 PM	0.0037	0.0170	0.0006	-	-	-	-
02:00 PM - 03:00 PM	0.0025	0.0150	0.0136	-	-	-	-
03:00 PM - 04:00 PM	0.0016	0.0182	0.0154	-	-	-	-
04:00 PM - 05:00 PM	0.0103	0.0156	0.0051	-	-	-	-
05:00 PM - 06:00 PM	0.0087	0.0106	0.0037	-	-	-	-
06:00 PM - 07:00 PM	0.0200	0.0075	0.0039	-	-	-	-
07:00 PM - 08:00 PM	0.0179	0.0065	0.0056	-	-	-	-
08:00 PM - 09:00 PM	0.0110	0.0080	0.0022	-	-	-	-
09:00 PM - 10:00 PM	0.0089	0.0061	0.0106	-	-	-	-
10:00 PM - 11:00 PM	0.0090	0.0073	0.0036	-	-	-	-
11:00 PM - 12:00 AM	0.0063	0.0037	0.0026	-	-	-	-
12:00 AM - 01:00 AM	0.0039	0.0055	0.0018	-	-	-	-
01:00 AM - 02:00 AM	0.0044	0.0050	0.0044	-	-	-	-
02:00 AM - 03:00 AM	0.0130	0.0012	0.0036	-	-	-	-
03:00 AM - 04:00 AM	0.0094	0.0009	0.0033	-	-	-	-
04:00 AM - 05:00 AM	0.0064	0.0055	0.0048	-	-	-	-
05:00 AM - 06:00 AM	0.0083	0.0059	0.0013	-	-	-	-
06:00 AM - 07:00 AM	0.0057	0.0030	0.0021	-	-	-	-
07:00 AM - 08:00 AM	0.0059	0.0005	0.0060	-	-	-	-
08:00 AM - 09:00 AM	0.0097	0.0064	<0.0001	-	-	-	-
09:00 AM - 10:00 AM	0.0148	0.0074	0.0089	-	-	-	-
Average	0.0081	0.0079	0.0049	-	-	-	-
1hr - Maximum	0.0200	0.0182	0.0154	-	-	-	-
Standard 1hr - Average	0.170	0.170	0.170	-	-	-	-

Standard : Notification of the National Environment Board No. 33, 2009 (B.E. 2552).
Reference Method : US EPAMethod Part 50 App. F (Chemiluminescence)

Approved by

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :
Project Name : Monitoring
Project Location : WHA CIE 1

Lot ID: 2513791
Date Received : Feb 24, 2025
Date Reported : Feb 25, 2025
Report Number: 3242657-1

Page 1 of 1

Sample Description Air Quality
Location เขตพัฒนาพิเศษภาคตะวันออก 47P 726911E 1443649N
Parameter Nitrogen dioxide (ppm)
Measurement Date Feb 14, 2025 - Feb 17, 2025
Measurement by Anurak Tongkhajonsakda

Time	2513791-4 Feb 14, 2025	2513791-5 Feb 15, 2025	2513791-6 Feb 16, 2025	-	-	-	-
10:00 AM - 11:00 AM	0.0034	0.0081	0.0236	-	-	-	-
11:00 AM - 12:00 PM	0.0029	0.0062	0.0110	-	-	-	-
12:00 PM - 01:00 PM	0.0028	0.0074	0.0095	-	-	-	-
01:00 PM - 02:00 PM	0.0048	0.0091	0.0089	-	-	-	-
02:00 PM - 03:00 PM	0.0079	0.0118	0.0098	-	-	-	-
03:00 PM - 04:00 PM	0.0101	0.0122	0.0098	-	-	-	-
04:00 PM - 05:00 PM	0.0261	0.0122	0.0126	-	-	-	-
05:00 PM - 06:00 PM	0.0149	0.0090	0.0117	-	-	-	-
06:00 PM - 07:00 PM	0.0090	0.0080	0.0105	-	-	-	-
07:00 PM - 08:00 PM	0.0100	0.0062	0.0092	-	-	-	-
08:00 PM - 09:00 PM	0.0070	0.0064	0.0059	-	-	-	-
09:00 PM - 10:00 PM	0.0054	0.0046	0.0063	-	-	-	-
10:00 PM - 11:00 PM	0.0052	0.0036	0.0063	-	-	-	-
11:00 PM - 12:00 AM	0.0068	0.0082	0.0094	-	-	-	-
12:00 AM - 01:00 AM	0.0049	0.0073	0.0085	-	-	-	-
01:00 AM - 02:00 AM	0.0056	0.0053	0.0076	-	-	-	-
02:00 AM - 03:00 AM	0.0061	0.0053	0.0080	-	-	-	-
03:00 AM - 04:00 AM	0.0064	0.0071	0.0069	-	-	-	-
04:00 AM - 05:00 AM	0.0076	0.0125	0.0081	-	-	-	-
05:00 AM - 06:00 AM	0.0233	0.0117	0.0094	-	-	-	-
06:00 AM - 07:00 AM	0.0110	0.0098	0.0189	-	-	-	-
07:00 AM - 08:00 AM	0.0083	0.0081	0.0084	-	-	-	-
08:00 AM - 09:00 AM	0.0060	0.0069	0.0064	-	-	-	-
09:00 AM - 10:00 AM	0.0047	0.0069	0.0076	-	-	-	-
Average	0.0083	0.0081	0.0098	-	-	-	-
1hr - Maximum	0.0261	0.0125	0.0236	-	-	-	-
Standard 1hr - Average	0.170	0.170	0.170	-	-	-	-

Standard : Notification of the National Environment Board No. 33, 2009 (B.E. 2552).
Reference Method : US EPAMethod Part 50 App. F (Chemiluminescence)

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited

331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1

Lot ID: 2513792

Date Received : Feb 24, 2025

Date Reported : Feb 25, 2025

Report Number: 3242658-1

Page 1 of 1

Sample Description	Air Quality						
Location	เขตพัฒนาพิเศษภาคตะวันออกในนิคมฯ 47P 726911E 1443649N						
Parameter	Sulfur Dioxide (mg/m3)						
Measurement Date	Feb 14, 2025 - Feb 17, 2025						
Measurement by	Anurak Tongkhajonsakda						
Time	2513792-4 Feb 14, 2025	2513792-5 Feb 15, 2025	2513792-6 Feb 16, 2025	-	-	-	-
10:00 AM - 11:00 AM	0.0387	0.0270	0.0257	-	-	-	-
11:00 AM - 12:00 PM	0.0291	0.0270	0.0254	-	-	-	-
12:00 PM - 01:00 PM	0.0233	0.0267	0.0249	-	-	-	-
01:00 PM - 02:00 PM	0.0050	0.0246	0.0257	-	-	-	-
02:00 PM - 03:00 PM	0.0267	0.0267	0.0257	-	-	-	-
03:00 PM - 04:00 PM	0.0301	0.0264	0.0254	-	-	-	-
04:00 PM - 05:00 PM	0.0296	0.0262	0.0254	-	-	-	-
05:00 PM - 06:00 PM	0.0314	0.0262	0.0254	-	-	-	-
06:00 PM - 07:00 PM	0.0293	0.0262	0.0254	-	-	-	-
07:00 PM - 08:00 PM	0.0288	0.0262	0.0254	-	-	-	-
08:00 PM - 09:00 PM	0.0288	0.0262	0.0254	-	-	-	-
09:00 PM - 10:00 PM	0.0285	0.0259	0.0254	-	-	-	-
10:00 PM - 11:00 PM	0.0283	0.0259	0.0254	-	-	-	-
11:00 PM - 12:00 AM	0.0283	0.0259	0.0254	-	-	-	-
12:00 AM - 01:00 AM	0.0278	0.0262	0.0257	-	-	-	-
01:00 AM - 02:00 AM	0.0278	0.0259	0.0254	-	-	-	-
02:00 AM - 03:00 AM	0.0278	0.0257	0.0254	-	-	-	-
03:00 AM - 04:00 AM	0.0275	0.0259	0.0254	-	-	-	-
04:00 AM - 05:00 AM	0.0275	0.0259	0.0254	-	-	-	-
05:00 AM - 06:00 AM	0.0275	0.0257	0.0251	-	-	-	-
06:00 AM - 07:00 AM	0.0272	0.0257	0.0251	-	-	-	-
07:00 AM - 08:00 AM	0.0272	0.0257	0.0251	-	-	-	-
08:00 AM - 09:00 AM	0.0272	0.0257	0.0251	-	-	-	-
09:00 AM - 10:00 AM	0.0272	0.0257	0.0251	-	-	-	-
Average (24 hrs)	0.0275	0.0260	0.0254	-	-	-	-
1hr - Maximum	0.0387	0.0270	0.0257	-	-	-	-
Standard 24 hrs - Average	0.3	0.3	0.3	-	-	-	-

Standard : Notification of the National Environment Board No. 10, 1995 (B.E. 2538), No. 24, 2004 (B.E. 2547).

Reference Method : US EPA Method Part 53 and 58

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Approved by

Scientist (S)

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited

331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1

Lot ID: 2513792

Date Received : Feb 24, 2025

Date Reported : Feb 25, 2025

Report Number: 3233914-1

Page 1 of 1

Sample Description	Air Quality						
Location	โรงเขีนนถว่น 47P 723898E 1443527N						
Parameter	Sulfur Dioxide (mg/m3)						
Measurement Date	Feb 14, 2025 - Feb 17, 2025						
Measurement by	Anurak Tongkhajonsakda						
Time	2513792-1 Feb 14, 2025	2513792-2 Feb 15, 2025	2513792-3 Feb 16, 2025	-	-	-	-
09:00 AM - 10:00 AM	0.0068	0.0147	0.0092	-	-	-	-
10:00 AM - 11:00 AM	0.0105	0.0139	0.0081	-	-	-	-
11:00 AM - 12:00 PM	0.0105	0.0139	0.0073	-	-	-	-
12:00 PM - 01:00 PM	0.0107	0.0134	0.0073	-	-	-	-
01:00 PM - 02:00 PM	0.0110	0.0131	0.0073	-	-	-	-
02:00 PM - 03:00 PM	0.0113	0.0131	0.0073	-	-	-	-
03:00 PM - 04:00 PM	0.0118	0.0131	0.0068	-	-	-	-
04:00 PM - 05:00 PM	0.0113	0.0131	0.0071	-	-	-	-
05:00 PM - 06:00 PM	0.0110	0.0131	0.0073	-	-	-	-
06:00 PM - 07:00 PM	0.0120	0.0131	0.0079	-	-	-	-
07:00 PM - 08:00 PM	0.0128	0.0131	0.0073	-	-	-	-
08:00 PM - 09:00 PM	0.0134	0.0131	0.0071	-	-	-	-
09:00 PM - 10:00 PM	0.0118	0.0134	0.0076	-	-	-	-
10:00 PM - 11:00 PM	0.0147	0.0128	0.0065	-	-	-	-
11:00 PM - 12:00 AM	0.0149	0.0126	0.0068	-	-	-	-
12:00 AM - 01:00 AM	0.0152	0.0120	0.0065	-	-	-	-
01:00 AM - 02:00 AM	0.0149	0.0120	0.0063	-	-	-	-
02:00 AM - 03:00 AM	0.0154	0.0113	0.0060	-	-	-	-
03:00 AM - 04:00 AM	0.0160	0.0110	0.0060	-	-	-	-
04:00 AM - 05:00 AM	0.0154	0.0115	0.0063	-	-	-	-
05:00 AM - 06:00 AM	0.0154	0.0118	0.0065	-	-	-	-
06:00 AM - 07:00 AM	0.0165	0.0113	0.0065	-	-	-	-
07:00 AM - 08:00 AM	0.0160	0.0115	0.0068	-	-	-	-
08:00 AM - 09:00 AM	0.0152	0.0097	0.0065	-	-	-	-
Average (24 hrs)	0.0131	0.0126	0.0070	-	-	-	-
1hr - Maximum	0.0165	0.0147	0.0092	-	-	-	-
Standard 24 hrs - Average	0.3	0.3	0.3	-	-	-	-

Standard : Notification of the National Environment Board No. 10, 1995 (B.E. 2538), No. 24, 2004 (B.E. 2547).

Reference Method : US EPA Method Part 53 and 58

Scientist (S)

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S:\Reports\Air SOxNOx_mg.rpt (4:30PM)



Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1

Lot ID: 2513794

Date Received : Feb 24, 2025

Date Reported : Mar 03, 2025

Report Number : 3233912-1

Sample Number : 2513794-1 to 3
Parameter : Wind Speed / Wind Direction
Location : โรงเก็บของ (GPS 47P 0723898E, 1443527N)
Sampling Date : Feb 14 - Feb 17, 2025
Sampling by : Anurak Tongkhajonsakda

Time	Feb 14 - Feb 15, 2025			Feb 15 - Feb 16, 2025			Feb 16 - Feb 17, 2025											
	WS (m/s)	WD (deg)		WS (m/s)	WD (deg)		WS (m/s)	WD (deg)										
09:00 AM - 10:00 AM	3.0	223.0	SW	0.5	326.0	NW	1.1	200.0	SSW	-	-	-	-	-	-	-	-	-
10:00 AM - 11:00 AM	1.4	268.0	W	0.0	-	-	0.8	300.0	WNW	-	-	-	-	-	-	-	-	-
11:00 AM - 12:00 PM	2.1	325.0	NW	0.6	278.0	W	0.0	-	-	-	-	-	-	-	-	-	-	-
12:00 PM - 01:00 PM	0.6	285.0	WNW	1.6	236.0	SW	1.0	272.0	W	-	-	-	-	-	-	-	-	-
01:00 PM - 02:00 PM	1.8	273.0	W	0.0	-	-	0.3	358.0	N	-	-	-	-	-	-	-	-	-
02:00 PM - 03:00 PM	0.3	257.0	WSW	0.0	-	-	0.7	228.0	SW	-	-	-	-	-	-	-	-	-
03:00 PM - 04:00 PM	0.0	-	-	0.0	-	-	1.6	203.0	SSW	-	-	-	-	-	-	-	-	-
04:00 PM - 05:00 PM	0.0	-	-	0.0	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-
05:00 PM - 06:00 PM	0.0	-	-	0.0	-	-	0.5	162.0	SSE	-	-	-	-	-	-	-	-	-
06:00 PM - 07:00 PM	1.8	139.0	SE	0.0	-	-	0.5	215.0	SW	-	-	-	-	-	-	-	-	-
07:00 PM - 08:00 PM	0.0	-	-	0.0	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.0	-	-	0.0	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-
09:00 PM - 10:00 PM	0.0	-	-	0.0	-	-	0.6	120.0	ESE	-	-	-	-	-	-	-	-	-
10:00 PM - 11:00 PM	0.0	-	-	0.0	-	-	0.8	106.0	ESE	-	-	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.0	-	-	0.0	-	-	0.3	140.0	SE	-	-	-	-	-	-	-	-	-
12:00 AM - 01:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-
05:00 AM - 06:00 AM	0.0	-	-	0.8	100.0	E	0.0	-	-	-	-	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	0.4	171.0	S	1.1	79.0	E	1.2	228.0	SW	-	-	-	-	-	-	-	-	-
07:00 AM - 08:00 AM	1.3	71.0	ENE	0.7	125.0	SE	0.0	-	-	-	-	-	-	-	-	-	-	-
08:00 AM - 09:00 AM	0.4	306.0	NW	0.5	357.0	N	0.1	-	-	-	-	-	-	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1

Lot ID: 2513798

Date Received : Feb 24, 2025

Date Reported : Feb 25, 2025

Report Number : 3233921-1

Sample Description : Air Quality
Location : วัดพันตึกจวน 47P 729638E 1447551N
Parameter : Sulfur Dioxide (mg/m3)
Measurement Date : Feb 14, 2025 - Feb 17, 2025
Measurement by : Anurak Tongkhajonsakda

Time	2513798-1 Feb 14, 2025	2513798-2 Feb 15, 2025	2513798-3 Feb 16, 2025	-	-	-	-
11:00 AM - 12:00 PM	0.0068	0.0068	0.0068	-	-	-	-
12:00 PM - 01:00 PM	0.0068	0.0068	0.0068	-	-	-	-
01:00 PM - 02:00 PM	0.0068	0.0071	0.0068	-	-	-	-
02:00 PM - 03:00 PM	0.0068	0.0071	0.0068	-	-	-	-
03:00 PM - 04:00 PM	0.0065	0.0071	0.0065	-	-	-	-
04:00 PM - 05:00 PM	0.0068	0.0071	0.0068	-	-	-	-
05:00 PM - 06:00 PM	0.0068	0.0071	0.0071	-	-	-	-
06:00 PM - 07:00 PM	0.0068	0.0071	0.0071	-	-	-	-
07:00 PM - 08:00 PM	0.0068	0.0071	0.0071	-	-	-	-
08:00 PM - 09:00 PM	0.0065	0.0068	0.0068	-	-	-	-
09:00 PM - 10:00 PM	0.0063	0.0068	0.0068	-	-	-	-
10:00 PM - 11:00 PM	0.0065	0.0068	0.0068	-	-	-	-
11:00 PM - 12:00 AM	0.0068	0.0068	0.0068	-	-	-	-
12:00 AM - 01:00 AM	0.0068	0.0068	0.0068	-	-	-	-
01:00 AM - 02:00 AM	0.0068	0.0068	0.0068	-	-	-	-
02:00 AM - 03:00 AM	0.0065	0.0068	0.0068	-	-	-	-
03:00 AM - 04:00 AM	0.0065	0.0068	0.0068	-	-	-	-
04:00 AM - 05:00 AM	0.0063	0.0068	0.0065	-	-	-	-
05:00 AM - 06:00 AM	0.0063	0.0068	0.0068	-	-	-	-
06:00 AM - 07:00 AM	0.0063	0.0068	0.0065	-	-	-	-
07:00 AM - 08:00 AM	0.0063	0.0068	0.0068	-	-	-	-
08:00 AM - 09:00 AM	0.0063	0.0068	0.0068	-	-	-	-
09:00 AM - 10:00 AM	0.0063	0.0068	0.0068	-	-	-	-
10:00 AM - 11:00 AM	0.0063	0.0068	0.0068	-	-	-	-
Average (24 hrs)	0.0066	0.0069	0.0068	-	-	-	-
1hr - Maximum	0.0068	0.0071	0.0071	-	-	-	-
Standard 24 hrs - Average	0.3	0.3	0.3	-	-	-	-

Standard : Notification of the National Environment Board No. 10, 1995 (B.E. 2538), No. 24, 2004 (B.E. 2547).

Reference Method : US EPA Method Part 53 and 58

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S:\Reports_Air SOxNOx_mg ppt (4:38PM)



Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1

Lot ID: 2513794

Date Received :Feb 24, 2025

Date Reported :Mar 03, 2025

Report Number :3233912-1

Page 1 of 2

Sample Number : 2513794-4 to 6

Parameter : Wind Speed / Wind Direction

Location : เขตที่พัฒนาและพาณิชย์กรรมในนิคมฯ (GPS 47P 0726911E, 1443649N)

Sampling Date : Feb 14 - Feb 17, 2025

Sampling by : Anurak Tongkhajonsakda

Time	Feb 14 - Feb 15, 2025		Feb 15 - Feb 16, 2025		Feb 16 - Feb 17, 2025									
	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)								
10:00 AM - 11:00 AM	1.4	245.0	WSW	1.1	347.0	NNW	2.1	69.0	ENE	-	-	-	-	-
11:00 AM - 12:00 PM	4.4	241.0	WSW	3.2	248.0	WSW	2.5	240.0	WSW	-	-	-	-	-
12:00 PM - 01:00 PM	4.1	254.0	WSW	2.2	232.0	SW	6.3	254.0	WSW	-	-	-	-	-
01:00 PM - 02:00 PM	2.3	231.0	SW	3.4	254.0	WSW	2.4	221.0	SW	-	-	-	-	-
02:00 PM - 03:00 PM	1.4	339.0	NNW	3.2	260.0	W	1.3	209.0	SSW	-	-	-	-	-
03:00 PM - 04:00 PM	0.9	244.0	WSW	2.3	228.0	SW	0.8	231.0	SW	-	-	-	-	-
04:00 PM - 05:00 PM	1.3	255.0	WSW	2.6	280.0	W	1.2	219.0	SW	-	-	-	-	-
05:00 PM - 06:00 PM	1.7	249.0	WSW	1.9	256.0	WSW	2.2	188.0	S	-	-	-	-	-
06:00 PM - 07:00 PM	0.6	153.0	SSE	0.0	-	-	2.1	157.0	SSE	-	-	-	-	-
07:00 PM - 08:00 PM	0.1	-	-	0.0	-	-	0.0	-	-	-	-	-	-	-
08:00 PM - 09:00 PM	0.8	161.0	SSE	1.2	263.0	W	0.8	149.0	SSE	-	-	-	-	-
09:00 PM - 10:00 PM	0.9	197.0	SSW	0.0	-	-	1.1	123.0	ESE	-	-	-	-	-
10:00 PM - 11:00 PM	0.0	-	-	0.0	-	-	0.0	-	-	-	-	-	-	-
11:00 PM - 12:00 AM	0.0	-	-	0.0	-	-	1.0	144.0	SE	-	-	-	-	-
12:00 AM - 01:00 AM	1.5	235.0	SW	0.7	120.0	ESE	0.0	-	-	-	-	-	-	-
01:00 AM - 02:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	-	-	-	-	-
02:00 AM - 03:00 AM	0.0	-	-	0.0	-	-	0.0	-	-	-	-	-	-	-
03:00 AM - 04:00 AM	0.3	18.0	NNE	0.0	-	-	0.0	-	-	-	-	-	-	-
04:00 AM - 05:00 AM	0.0	-	-	0.0	-	-	0.3	210.0	SSW	-	-	-	-	-
05:00 AM - 06:00 AM	0.4	147.0	SSE	0.0	-	-	0.0	-	-	-	-	-	-	-
06:00 AM - 07:00 AM	1.4	236.0	SW	0.0	-	-	1.8	168.0	SSE	-	-	-	-	-
07:00 AM - 08:00 AM	0.0	-	-	1.9	159.0	SSE	2.1	184.0	S	-	-	-	-	-
08:00 AM - 09:00 AM	2.8	22.0	NNE	1.0	229.0	SW	0.7	245.0	WSW	-	-	-	-	-
09:00 AM - 10:00 AM	0.1	-	-	1.2	123.0	ESE	0.6	255.0	WSW	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1

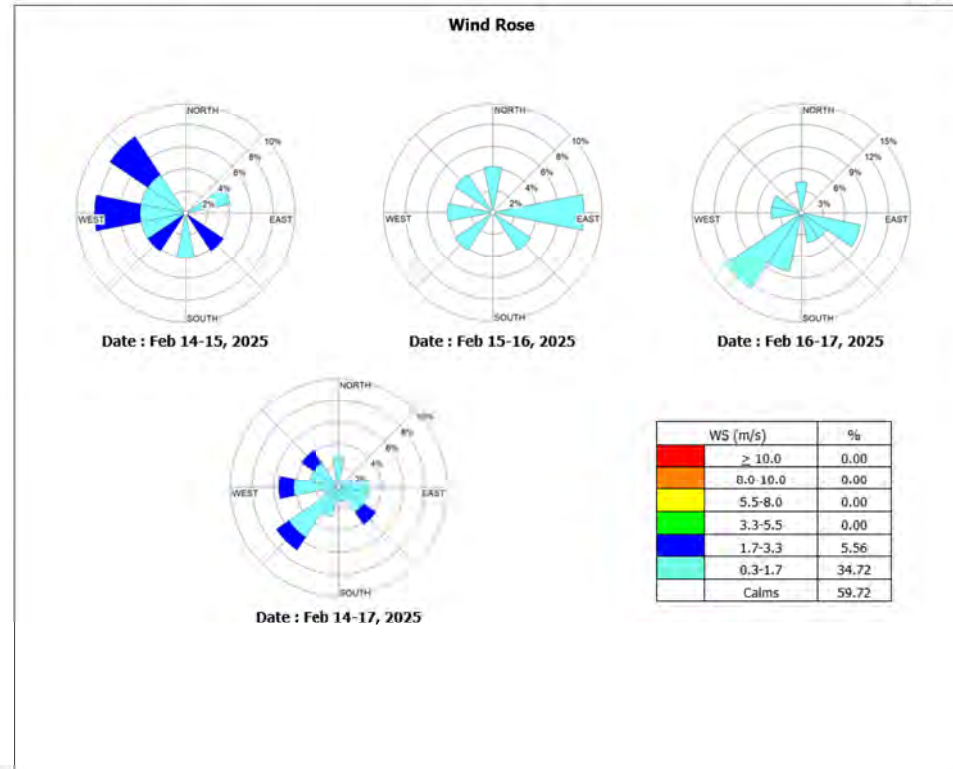
Lot ID: 2513794

Date Received :Feb 24, 2025

Date Reported :Mar 03, 2025

Report Number :3233912-1

Page 2 of 2



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Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1

Lot ID: 2513801

Date Received :Feb 24, 2025

Date Reported :Mar 03, 2025

Report Number :3233918-1

Page 1 of 2

Sample Number : 2513801-1 to 3
Parameter : Wind Speed / Wind Direction
Location : วัดพันเตลั่นนอก (GPS 47P 0729638E, 1447551N)
Sampling Date : Feb 14 - Feb 17, 2025
Sampling by : Anurak Tongkhajonsakda

Time	Feb 14 - Feb 15, 2025		Feb 15 - Feb 16, 2025		Feb 16 - Feb 17, 2025									
	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)	WS (m/s)	WD (deg)								
11:00 AM - 12:00 PM	1.0	250.0	WSW	0.8	3.0	N	0.6	224.0	SW	-	-	-	-	-
12:00 PM - 01:00 PM	0.8	298.0	WNW	0.7	348.0	NNW	0.5	258.0	WSW	-	-	-	-	-
01:00 PM - 02:00 PM	0.2	-	-	0.2	-	-	1.9	201.0	SSW	-	-	-	-	-
02:00 PM - 03:00 PM	0.4	346.0	NNW	0.9	301.0	WNW	0.8	252.0	WSW	-	-	-	-	-
03:00 PM - 04:00 PM	1.3	220.0	SW	0.7	225.0	SW	1.9	226.0	SW	-	-	-	-	-
04:00 PM - 05:00 PM	0.6	249.0	WSW	0.5	248.0	WSW	1.2	219.0	SW	-	-	-	-	-
05:00 PM - 06:00 PM	0.6	239.0	WSW	0.5	333.0	NNW	0.5	187.0	S	-	-	-	-	-
06:00 PM - 07:00 PM	0.8	239.0	WSW	1.3	318.0	NW	0.3	171.0	S	-	-	-	-	-
07:00 PM - 08:00 PM	0.2	-	-	0.5	281.0	W	0.8	143.0	SE	-	-	-	-	-
08:00 PM - 09:00 PM	0.7	97.0	E	0.4	281.0	W	0.3	147.0	SSE	-	-	-	-	-
09:00 PM - 10:00 PM	0.8	98.0	E	0.7	243.0	WSW	0.3	118.0	ESE	-	-	-	-	-
10:00 PM - 11:00 PM	0.8	98.0	E	0.3	243.0	WSW	0.3	118.0	ESE	-	-	-	-	-
11:00 PM - 12:00 AM	0.3	98.0	E	0.6	243.0	WSW	0.7	113.0	ESE	-	-	-	-	-
12:00 AM - 01:00 AM	0.2	-	-	1.0	243.0	WSW	0.4	175.0	S	-	-	-	-	-
01:00 AM - 02:00 AM	0.2	-	-	0.6	243.0	WSW	1.1	175.0	S	-	-	-	-	-
02:00 AM - 03:00 AM	0.4	333.0	NNW	0.6	243.0	WSW	0.6	175.0	S	-	-	-	-	-
03:00 AM - 04:00 AM	0.0	-	-	1.1	243.0	WSW	1.2	175.0	S	-	-	-	-	-
04:00 AM - 05:00 AM	0.0	-	-	1.3	243.0	WSW	1.2	175.0	S	-	-	-	-	-
05:00 AM - 06:00 AM	0.0	-	-	0.0	-	-	0.7	175.0	S	-	-	-	-	-
06:00 AM - 07:00 AM	0.0	-	-	0.0	-	-	1.2	216.0	SW	-	-	-	-	-
07:00 AM - 08:00 AM	0.0	-	-	0.0	-	-	0.5	157.0	SSE	-	-	-	-	-
08:00 AM - 09:00 AM	0.0	-	-	0.0	-	-	0.2	-	-	-	-	-	-	-
09:00 AM - 10:00 AM	0.4	64.0	ENE	0.0	-	-	0.3	250.0	WSW	-	-	-	-	-
10:00 AM - 11:00 AM	0.1	-	-	1.0	213.0	SSW	1.0	255.0	WSW	-	-	-	-	-

Reference Method : Cup Anemometer & Anodized Aluminium Vane Method

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331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1

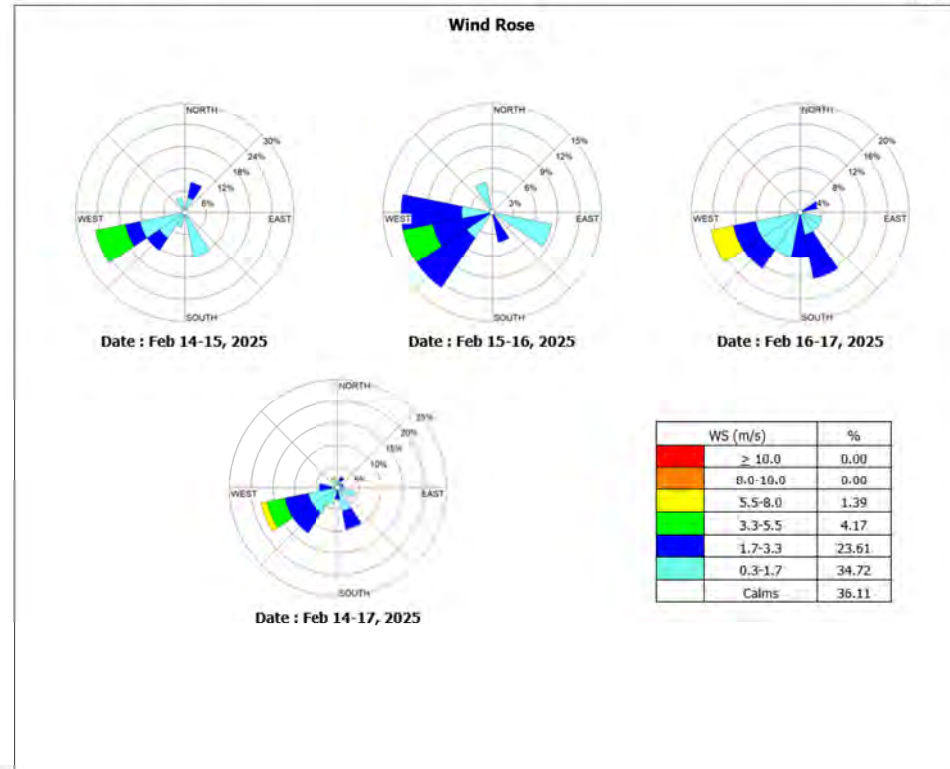
Lot ID: 2513794

Date Received :Feb 24, 2025

Date Reported :Mar 03, 2025

Report Number :3233912-1

Page 2 of 2



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Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1

Lot ID: 2513801

Date Received :Feb 24, 2025

Date Reported :Mar 03, 2025

Report Number :3233918-1

Page 2 of 2

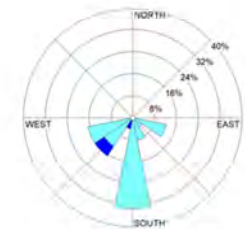
Wind Rose



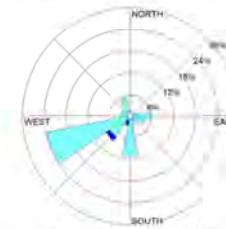
Date : Feb 14-15, 2025



Date : Feb 15-16, 2025



Date : Feb 16-17, 2025



Date : Feb 14-17, 2025

WS (m/s)	%
≥ 10.0	0.00
8.0-10.0	0.00
5.5-8.0	0.00
3.3-5.5	0.00
1.7-3.3	2.78
0.3-1.7	72.22
Calms	25.00

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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ภาคผนวก ค-2

คุณภาพน้ำผิวดิน



Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230
P/O : 54250181
Project Name : Monitoring
Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2515872
Date Received : Mar 03, 2025
Date Reported : Aug 27, 2025
Report Number : 3392257-1

Page 2 of 2

Sample Number 2515872-1
Sampled Date Mar 03, 2025 10:18 AM
Sample Description Surface Water
Location หน่วยปราบกมลโหลผ่านด่านข้างพื้นที่นิคมฯ(W1)
Date Analysis Commenced Mar 03, 2025
Condition of Sample Contained in two glass vials, two BOD bottles and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Hardness as CaCO ₃ *	mg/L	-	1	168	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2340 C	Rayong
Total Suspended Solids Dried at 103-105 degree C *	mg/L	-	5	32	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : 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)
n : Change from Natural condition not more than 3 degree C

Note : This Analysis test report is issued to supersede report No.3253563-1, Date Reported : Mar 10, 2025 due to revise analytical information.

Sampling By : Wasan Kinunti , Pattarapol Sawangjaitam

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.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
- Sampling is not included in scope of accreditation ISO/IEC 17025

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230
P/O : 54250181
Project Name : Monitoring
Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2515872
Date Received : Mar 03, 2025
Date Reported : Aug 27, 2025
Report Number : 3392257-1

Page 1 of 2

Sample Number 2515872-1
Sampled Date Mar 03, 2025 10:18 AM
Sample Description Surface Water
Location หน่วยปราบกมลโหลผ่านด่านข้างพื้นที่นิคมฯ(W1)
Date Analysis Commenced Mar 03, 2025
Condition of Sample Contained in two glass vials, two BOD bottles and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
[A] Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
[A] Lead	mg/L	0.0003	0.0005	0.0005	≤0.05	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
[A] Mercury	mg/L	0.0001	0.0005	<0.0005	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.35	≤0.5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH ₃ (F)	Rayong
Dissolved Oxygen *	mg/L	-	0.1	4.9	≥2	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-O (C)	Rayong
Nitrate as N *	mg/L	0.015	0.05	Not Detected	≤5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NO ₃ (E)	Rayong
pH at 25 degree C	-	-	-	7.3	5.0-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :
Project Name : Monitoring
Project Location: WHA CIE 1



TESTING
No.0009

Lot ID: 2526362
Date Received : Mar 21, 2025
Date Reported : Mar 28, 2025
Report Number : 3269993-1

Sample Number 2526362-1
Sampled Date Mar 21, 2025 10:27 AM
Sample Description Surface Water
Location บริเวณทางเดินผ่านด้านข้างพื้นที่ถม (W1)
Date Analysis Commenced Mar 22, 2025
Condition of Sample Contained in three plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, a lot of solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	33000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

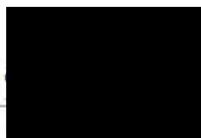
Guideline : Notification of the National Environmental Board, No. 8, B.E.2537 issued under the Enhancement and Conservation of National Environmental Quality Act. B.E.2535, published in the Royal Government Gazette, Vol. 111, Part 16, Dated February 24, B.E. 2537 (Class 4)

n: Change from Natural condition not more than 3 degree C
Sampling By : Surawit Narapong , Pattarapol Sawangjaitam

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.
- Sampling is not included in scope of accreditation ISO/IEC 17025

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Signature (S)

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O : 54250181
Project Name : Monitoring
Project Location: WHA CIE 1

Lot ID: 2515872
Date Received : Mar 03, 2025
Date Reported : Aug 27, 2025
Report Number : 3392257-2

Sample Number 2515872-1
Sampled Date Mar 03, 2025 10:18 AM
Sample Description Surface Water
Location บริเวณทางเดินผ่านด้านข้างพื้นที่ถม (W1)
Date Analysis Commenced Mar 05, 2025
Condition of Sample Contained in two glass vials, two BOD bottles and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD	mg/L	-	2	7.1	≤4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O C	Rayong

Guideline : 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)

n: Change from Natural condition not more than 3 degree C

Note : This Analysis test report is reissued to supersede report No.3253563-1, Date Reported : Mar 10, 2025 due to revise analytical information.

Sampling By : Wasan Kinunti , Pattarapol Sawangjaitam

Remark :
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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited

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Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1



TESTING
No.0042

Lot ID: 2515872

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3253564-1

Sample Number	2515872-2						
Sampled Date	Mar 03, 2025 10:30 AM						
Sample Description	Surface Water						
Location	บริเวณทางหลวงหมายเลข 331 กิโลเมตรที่ 1 (W2)						
Date Analysis Commenced	Mar 03, 2025						
Condition of Sample	Contained in two glass vials, two BOD bottles and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Hardness as CaCO ₃ *	mg/L	-	1	293	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2340 C	Rayong
Total Suspended Solids Dried at 103-105 degree C *	mg/L	-	5	<5	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : 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)

n: Change from Natural condition not more than 3 degree C

Sampling By : Wasan Kinunti , Pattarapol Sawangjaitam

Remark :

- LOD : Limit of Detection

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

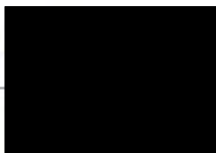
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

- Sampling is not included in scope of accreditation ISO/IEC 17025

- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd., Bangkok Branch, DSS Accreditation No. 0009.

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited

331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1



TESTING
No.0042

Lot ID: 2515872

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

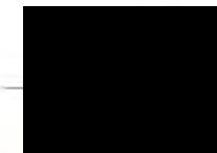
Report Number : 3253564-1

Sample Number	2515872-2						
Sampled Date	Mar 03, 2025 10:30 AM						
Sample Description	Surface Water						
Location	บริเวณทางหลวงหมายเลข 331 กิโลเมตรที่ 1 (W2)						
Date Analysis Commenced	Mar 03, 2025						
Condition of Sample	Contained in two glass vials, two BOD bottles and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
[A] Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok
[A] Lead	mg/L	0.0003	0.0005	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok
[A] Mercury	mg/L	0.0001	0.0005	<0.0005	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Microbiological Testing							
[A] Total Coliform	MPN/100mL	-	-	2200.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
BOD *	mg/L	-	2	<2.0	≤4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O C	Rayong
Dissolved Oxygen *	mg/L	-	0.1	5.1	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-O (C)	Rayong
pH at 25 degree C		-	-	7.2	5.0-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong

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TESTING
No.0042

Analysis / Test Report

Client : WHA Industrial Development Public Company Limited

331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location: WHA CIE 1

Lot ID: 2515872

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3253565-1

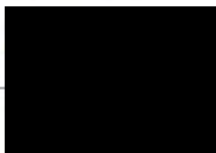
Page 1 of 2

Sample Number	2515872-3						
Sampled Date	Mar 03, 2025 10:45 AM						
Sample Description	Surface Water						
Location	ท่าอากาศยานสุวรรณภูมิผ่านด่านทางพิเศษมิตรมาจุฬารัตน์ (W3)						
Date Analysis Commenced	Mar 03, 2025						
Condition of Sample	Contained in two glass vials, two BOD bottles and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
^[A] Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok
^[A] Lead	mg/L	0.0003	0.0005	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok
^[A] Mercury	mg/L	0.0001	0.0005	<0.0005	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Microbiological Testing							
^[A] Total Coliform	MPN/100mL	-	-	3300.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
BOD *	mg/L	-	2	2.2	≤4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O C	Rayong
Dissolved Oxygen *	mg/L	-	0.1	9.2	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-O (C)	Rayong
Nitrate as N *	mg/L	0.015	0.05	0.06	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NO3 (E)	Rayong

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited

331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location: WHA CIE 1

Lot ID: 2526362

Date Received : Mar 21, 2025

Date Reported : Mar 28, 2025

Report Number : 3269994-1

Page 1 of 1

Sample Number	2526362-2						
Sampled Date	Mar 21, 2025 10:36 AM						
Sample Description	Surface Water						
Location	ท่าอากาศยานสุวรรณภูมิผ่านด่านทางพิเศษมิตรมาจุฬารัตน์ (W2)						
Date Analysis Commenced	Mar 21, 2025						
Condition of Sample	Contained in two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.02	0.05	0.21	≤0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (F)	Rayong
Nitrate as N	mg/L	0.015	0.05	1.25	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NO3 (E)	Rayong

Guideline : 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)

n: Change from Natural condition not more than ± degree C

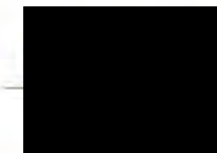
Sampling By : Surawit Narapong , Pattarapol Sawangjaitam

Remark :

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

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location: WHA CIE 1

Lot ID: 2526362

Date Received : Mar 21, 2025

Date Reported : Aug 25, 2025

Report Number : 3390952-2

Page 1 of 1

Sample Number 2526362-3
Sampled Date Mar 21, 2025 10:48 AM
Sample Description Surface Water
Location หน่วยปราบหัดโกลผ่านด้านข้างพื้นที่นิคมอุตสาหกรรม (W3)
Date Analysis Commenced Mar 21, 2025
Condition of Sample Contained in two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.02	0.05	0.50	≤0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (F)	Rayong

Guideline : 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)
n: Change from Natural condition not more than 3 degree C

Note : This Analysis test report is issued to supersede report No.3269995-1, Date Reported : Mar 28, 2025 due to revise analytical information.

Sampling By : Surawit Narapong , Pattarapol Sawangjaitam

Remark :

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location: WHA CIE 1



TESTING

No.0042

Lot ID: 2515872

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3253565-1

Page 2 of 2

Sample Number 2515872-3
Sampled Date Mar 03, 2025 10:45 AM
Sample Description Surface Water
Location หน่วยปราบหัดโกลผ่านด้านข้างพื้นที่นิคมอุตสาหกรรม (W3)
Date Analysis Commenced Mar 03, 2025
Condition of Sample Contained in two glass vials, two BOD bottles and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C		-	-	7.3	5.0-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Total Hardness as CaCO3 *	mg/L	-	1	160	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2340 C	Rayong
Total Suspended Solids Dried at 103-105 degree C *	mg/L	-	5	9	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : 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)
n: Change from Natural condition not more than 3 degree C

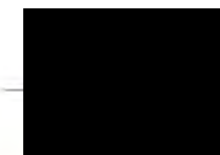
Sampling By : Wasan Kinunti , Pattarapol Sawangjaitam

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.
- Sampling is not included in scope of accreditation ISO/IEC 17025
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.

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TESTING
No.0042

Analysis / Test Report

Client : WHA Industrial Development Public Company Limited

331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1

Lot ID: 2515872

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3253566-1

Page 2 of 2

Sample Number	2515872-4						
Sampled Date	Mar 03, 2025 11:10 AM						
Sample Description	Surface Water						
Location	บริเวณทางหลวงเส้นกั้นน้ำนอกพื้นที่นิคมฯ(ทางระบายน้ำฝนของนิคมฯ ด้านทาง NTS)(W4)						
Date Analysis Commenced	Mar 03, 2025						
Condition of Sample	Contained in two glass vials, two BOD bottles and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Nitrate as N *	mg/L	0.015	0.05	0.95	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NO3 (E)	Rayong
pH at 25 degree C	-	-	-	7.7	5.0-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Total Hardness as CaCO3 *	mg/L	-	1	361	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2340 C	Rayong
Total Suspended Solids Dried at 103-105 degree C *	mg/L	-	5	<5	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : 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)

n: Change from Natural condition not more than 3 degree C

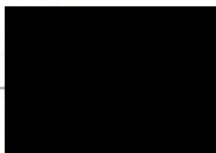
Sampling By : Wasan Kinunti , Pattarapol Sawangjaitam

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.
- Sampling is not included in scope of accreditation ISO/IEC 17025
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.

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TESTING
No.0042

Analysis / Test Report

Client : WHA Industrial Development Public Company Limited

331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1

Lot ID: 2515872

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

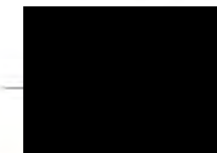
Report Number : 3253566-1

Page 1 of 2

Sample Number	2515872-4						
Sampled Date	Mar 03, 2025 11:10 AM						
Sample Description	Surface Water						
Location	บริเวณทางหลวงเส้นกั้นน้ำนอกพื้นที่นิคมฯ(ทางระบายน้ำฝนของนิคมฯ ด้านทาง NTS)(W4)						
Date Analysis Commenced	Mar 03, 2025						
Condition of Sample	Contained in two glass vials, two BOD bottles and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
[A] Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
[A] Lead	mg/L	0.0003	0.0005	<0.0005	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
[A] Mercury	mg/L	0.0001	0.0005	<0.0005	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Microbiological Testing							
[A] Total Coliform	MPN/100mL	-	-	2800.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.11	≤0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (F)	Rayong
BOD *	mg/L	-	2	<2.0	≤4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O C	Rayong
Dissolved Oxygen *	mg/L	-	0.1	7.8	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-O (C)	Rayong

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TESTING
No.0042

Analysis / Test Report

Client : WHA Industrial Development Public Company Limited

331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location: WHA CIE 1

Lot ID: 2515872

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3253567-1

Sample Number	2515872-5						
Sampled Date	Mar 03, 2025 10:05 AM						
Sample Description	Surface Water						
Location	ลำห้วยน้ำไหล(ห้วยหนองนา) ทางจากจุดตรวจน้ำทิ้งจากโรงงานวัด 150 เมตร(W5)						
Date Analysis Commenced	Mar 03, 2025						
Condition of Sample	Contained in two glass vials, two BOD bottles and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Hardness as CaCO ₃ *	mg/L	-	1	160	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2340 C	Rayong
Total Suspended Solids Dried at 103-105 degree C *	mg/L	-	5	8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : 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)

n: Change from Natural condition not more than 3 degree C

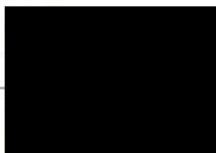
Sampling By : Wasan Kinunti , Pattarapol Sawangjaitam

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- Sampling is not included in scope of accreditation ISO/IEC 17025
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TESTING
No.0042

Analysis / Test Report

Client : WHA Industrial Development Public Company Limited

331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location: WHA CIE 1

Lot ID: 2515872

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

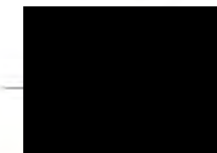
Report Number : 3253567-1

Sample Number	2515872-5						
Sampled Date	Mar 03, 2025 10:05 AM						
Sample Description	Surface Water						
Location	ลำห้วยน้ำไหล(ห้วยหนองนา) ทางจากจุดตรวจน้ำทิ้งจากโรงงานวัด 150 เมตร(W5)						
Date Analysis Commenced	Mar 03, 2025						
Condition of Sample	Contained in two glass vials, two BOD bottles and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
[A] Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
[A] Lead	mg/L	0.0003	0.0005	<0.0005	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
[A] Mercury	mg/L	0.0001	0.0005	<0.0005	≤0.002	In-house method : STM 05-007 based on United States Environmental Protection Agency, 2002, EPA Method 1631, Revision E	Bangkok
Microbiological Testing							
[A] Total Coliform	MPN/100mL	-	-	2200.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Dissolved Oxygen *	mg/L	-	0.1	6.3	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-O (C)	Rayong
Nitrate as N *	mg/L	0.015	0.05	0.74	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NO ₃ (E)	Rayong
pH at 25 degree C		-	-	7.7	5.0-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230
P/O : 54250181
Project Name : Monitoring
Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2549680
Date Received : Jun 02, 2025
Date Reported : Jun 10, 2025
Report Number : 3328751-1

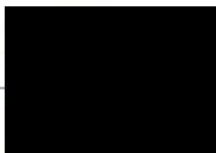
Page 1 of 2

Sample Number 2549680-1
Sampled Date Jun 02, 2025 10:25 AM
Sample Description Surface Water
Location หน่วยปราบกมลโหลผ่านด้านข้างพื้นที่กม.9(W1)
Date Analysis Commenced Jun 02, 2025
Condition of Sample Contained in two BOD bottles, two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
^[A] Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok
^[A] Lead	mg/L	0.0003	0.0005	<0.0005	≤0.05	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok
^[A] Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Microbiological Testing							
^[A] Total Coliform	MPN/100mL	-	-	2200.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.11	≤0.5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (F)	Rayong
BOD *	mg/L	-	2	<2.0	≤4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O C	Rayong
Dissolved Oxygen *	mg/L	-	0.1	4.1	≥2	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-O (C)	Rayong

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :
Project Name : Monitoring
Project Location : WHA CIE 1

Lot ID: 2515872
Date Received : Mar 03, 2025
Date Reported : Mar 10, 2025
Report Number : 3253567-2

Page 1 of 1

Sample Number 2515872-5
Sampled Date Mar 03, 2025 10:05 AM
Sample Description Surface Water
Location คลังน้ำดิบ(หน่วยกม.9) หน่วยกำจัดขยะน้ำทิ้งจากถนนกม.150 เมตร(W5)
Date Analysis Commenced Mar 03, 2025
Condition of Sample Contained in two glass vials, two BOD bottles and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and no turbid

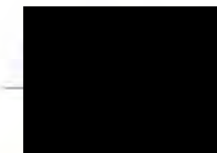
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.02	0.05	4.28	≤0.5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (F)	Rayong
BOD	mg/L	-	2	6.2	≤4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O C	Rayong

Guideline : 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)
n: Change from Natural condition not more than 3 degree C
Sampling By : Wasan Kinunti , Pattarapol Sawangjaitam

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

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230
P/O : 54250181
Project Name : Monitoring
Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2549680
Date Received : Jun 02, 2025
Date Reported : Jun 10, 2025
Report Number : 3328752-1

Page 1 of 2

Sample Number 2549680-2
Sampled Date Jun 02, 2025 10:40 AM
Sample Description Surface Water
Location หัวขบวนหลังโหลผ่านด้านข้างพื้นที่นิคมฯต1(W2)
Date Analysis Commenced Jun 02, 2025
Condition of Sample Contained in two BOD bottles, two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
^[A] Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok
^[A] Lead	mg/L	0.0003	0.0005	0.0008	≤0.05	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok
^[A] Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.12	≤0.5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (F)	Rayong
BOD *	mg/L	-	2	<2.0	≤4	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O C	Rayong
Dissolved Oxygen *	mg/L	-	0.1	5.8	≥2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-O (C)	Rayong

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230
P/O : 54250181
Project Name : Monitoring
Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2549680
Date Received : Jun 02, 2025
Date Reported : Jun 10, 2025
Report Number : 3328751-1

Page 2 of 2

Sample Number 2549680-1
Sampled Date Jun 02, 2025 10:25 AM
Sample Description Surface Water
Location หัวขบวนก่อนโหลผ่านด้านข้างพื้นที่นิคมฯ(W1)
Date Analysis Commenced Jun 02, 2025
Condition of Sample Contained in two BOD bottles, two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Nitrate as N *	mg/L	0.015	0.05	<0.05	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NO3 (E)	Rayong
pH at 25 degree C	-	-	-	7.3	5.0-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Total Hardness as CaCO3 *	mg/L	-	1	149	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2340 C	Rayong
Total Suspended Solids Dried at 103-105 degree C *	mg/L	-	5	9	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : 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)
n: Change from Natural condition not more than 3 degree C

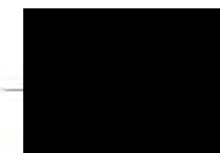
Sampling By : Amonwich Wongsachai , Thanasoun Namakunna

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.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
- Sampling is not included in scope of accreditation ISO/IEC 17025

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1



TESTING
No.0009
Lot ID: 24143380

Date Received : Jun 23, 2025

Date Reported : Jun 30, 2025

Report Number : 3348142-1

Page 1 of 1

Sample Number 24143380-1
Sampled Date Jun 23, 2025 9:55 AM
Sample Description Surface Water
Location หน่วยปราบหัดงโหลผานด้านข้างพื้นที่นิคมฯจุดที่1 (W2)
Date Analysis Commenced Jun 24, 2025
Condition of Sample Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL			7900.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : 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)
n: Change from Natural condition not more than 3 degree C

Sampling By : Jirayu Raengritdi

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.
- Sampling is not included in scope of accreditation ISO/IEC 17025

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O : 54250181

Project Name : Monitoring

Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2549680

Date Received : Jun 02, 2025

Date Reported : Jun 10, 2025

Report Number : 3328752-1

Page 2 of 2

Sample Number 2549680-2
Sampled Date Jun 02, 2025 10:40 AM
Sample Description Surface Water
Location หน่วยปราบหัดงโหลผานด้านข้างพื้นที่นิคมฯจุดที่1(W2)
Date Analysis Commenced Jun 02, 2025
Condition of Sample Contained in two BOD bottles, two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Nitrate as N *	mg/L	0.015	0.05	2.37	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NO3 (E)	Rayong
pH at 25 degree C	-	-	-	7.3	5.0-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Total Hardness as CaCO3 *	mg/L	-	1	125	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2340 C	Rayong
Total Suspended Solids Dried at 103-105 degree C *	mg/L	-	5	30	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : 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)
n: Change from Natural condition not more than 3 degree C

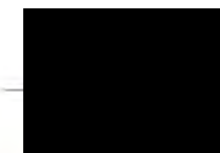
Sampling By : Amonwich Wongsachai , Thanasoun Namakunna

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.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230
P/O : 54250181
Project Name : Monitoring
Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2549680

Date Received : Jun 02, 2025
Date Reported : Jun 10, 2025
Report Number : 3328753-1

Page 2 of 2

Sample Number 2549680-3
Sampled Date Jun 02, 2025 10:55 AM
Sample Description Surface Water
Location หน่วยปราบหึ่งโหลผ่านด้านข้างพื้นที่นิคมอุตสาหกรรม2(W3)
Date Analysis Commenced Jun 02, 2025
Condition of Sample Contained in two BOD bottles, two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Nitrate as N *	mg/L	0.015	0.05	2.86	≤5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NO3 (E)	Rayong
pH at 25 degree C	-	-	-	7.4	5.0-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Total Hardness as CaCO3 *	mg/L	-	1	77	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2340 C	Rayong
Total Suspended Solids Dried at 103-105 degree C *	mg/L	-	5	12	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : 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)
n: Change from Natural condition not more than 3 degree C

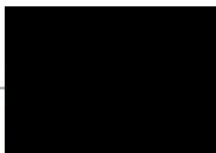
Sampling By : Amonwich Wongsachai , Thanasoun Namakunna

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.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230
P/O : 54250181
Project Name : Monitoring
Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2549680

Date Received : Jun 02, 2025
Date Reported : Jun 10, 2025
Report Number : 3328753-1

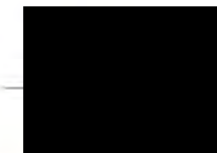
Page 1 of 2

Sample Number 2549680-3
Sampled Date Jun 02, 2025 10:55 AM
Sample Description Surface Water
Location หน่วยปราบหึ่งโหลผ่านด้านข้างพื้นที่นิคมอุตสาหกรรม2(W3)
Date Analysis Commenced Jun 02, 2025
Condition of Sample Contained in two BOD bottles, two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
^[A] Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
^[A] Lead	mg/L	0.0003	0.0005	Not Detected	≤0.05	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
^[A] Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Microbiological Testing							
^[A] Total Coliform	MPN/100mL	-	-	7900.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.17	≤0.5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (F)	Rayong
BOD *	mg/L	-	2	<2.0	≤4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O C	Rayong
Dissolved Oxygen *	mg/L	-	0.1	5.7	≥2	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-O (C)	Rayong

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230
P/O : 54250181
Project Name : Monitoring
Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2549680

Date Received : Jun 02, 2025
Date Reported : Jun 10, 2025
Report Number : 3328754-1

Page 2 of 2

Sample Number 2549680-4
Sampled Date Jun 02, 2025 11:45 AM
Sample Description Surface Water
Location หน่วยปารามบริเวณเก็บกักน้ำนอกพื้นที่นิคมฯ(ทางระบายน้ำฝนของนิคมฯ ด้านข้าง NTS)(W4)
Date Analysis Commenced Jun 02, 2025
Condition of Sample Contained in two BOD bottles, two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Nitrate as N *	mg/L	0.015	0.05	0.44	≤5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NO3 (E)	Rayong
pH at 25 degree C	-	-	-	7.8	5.0-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Total Hardness as CaCO3 *	mg/L	-	1	160	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2340 C	Rayong
Total Suspended Solids Dried at 103-105 degree C *	mg/L	-	5	<5	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : 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)
n: Change from Natural condition not more than 3 degree C

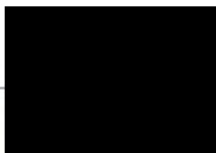
Sampling By : Amonwich Wongsachai , Thanasoun Namakunna

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230
P/O : 54250181
Project Name : Monitoring
Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2549680

Date Received : Jun 02, 2025
Date Reported : Jun 10, 2025
Report Number : 3328754-1

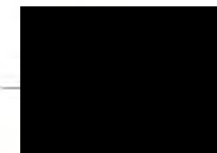
Page 1 of 2

Sample Number 2549680-4
Sampled Date Jun 02, 2025 11:45 AM
Sample Description Surface Water
Location หน่วยปารามบริเวณเก็บกักน้ำนอกพื้นที่นิคมฯ(ทางระบายน้ำฝนของนิคมฯ ด้านข้าง NTS)(W4)
Date Analysis Commenced Jun 02, 2025
Condition of Sample Contained in two BOD bottles, two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
^[A] Cadmium	mg/L	0.0003	0.0005	0.0006	≤0.005	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
^[A] Lead	mg/L	0.0003	0.0005	0.0008	≤0.05	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
^[A] Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Microbiological Testing							
^[A] Total Coliform	MPN/100mL	-	-	1300.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.08	≤0.5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (F)	Rayong
BOD *	mg/L	-	2	<2.0	≤4	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O C	Rayong
Dissolved Oxygen *	mg/L	-	0.1	5.9	≥2	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-O (C)	Rayong

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Analysis / Test Report

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Chonburi Thailand 20230
P/O : 54250181
Project Name : Monitoring
Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2549680
Date Received : Jun 02, 2025
Date Reported : Jun 10, 2025
Report Number : 3328755-1

Page 2 of 2

Sample Number 2549680-5
Sampled Date Jun 02, 2025 10:15 AM
Sample Description Surface Water
Location ลำพูนน้ำไหล(ท่าขมิ้น) ห่างจากจุดระบายน้ำโรงงานมาวัด 150 เมตร(W5)
Date Analysis Commenced Jun 02, 2025
Condition of Sample Contained in two BOD bottles, two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
pH at 25 degree C	-	-	-	7.3	5.0-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Total Hardness as CaCO ₃ *	mg/L	-	1	149	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2340 C	Rayong
Total Suspended Solids Dried at 103-105 degree C *	mg/L	-	5	28	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : 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)
n: Change from Natural condition not more than 3 degree C
Sampling By : Amonwich Wongsachai , Thanasoun Namakunna

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.
- [A] Analysis conducted by ALS Laboratory Group (Thailand) Co.,Ltd. Bangkok Branch, DSS Accreditation No. 0009.
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Client : WHA Industrial Development Public Company Limited
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Chonburi Thailand 20230
P/O : 54250181
Project Name : Monitoring
Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2549680
Date Received : Jun 02, 2025
Date Reported : Jun 10, 2025
Report Number : 3328755-1

Page 1 of 2

Sample Number 2549680-5
Sampled Date Jun 02, 2025 10:15 AM
Sample Description Surface Water
Location ลำพูนน้ำไหล(ท่าขมิ้น) ห่างจากจุดระบายน้ำโรงงานมาวัด 150 เมตร(W5)
Date Analysis Commenced Jun 02, 2025
Condition of Sample Contained in two BOD bottles, two glass vials and five plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Lead	mg/L	0.0003	0.0005	0.0005	≤0.05	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury	mg/L	0.0001	0.0005	Not Detected	≤0.002	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.02	0.05	0.49	≤0.5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (F)	Rayong
Dissolved Oxygen *	mg/L	-	0.1	5.0	≥2	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-O (C)	Rayong
Nitrate as N *	mg/L	0.015	0.05	1.50	≤5	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NO3 (E)	Rayong

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1

Lot ID: 24143380

Date Received : Jun 23, 2025

Date Reported : Jun 30, 2025

Report Number : 3348143-2

Page 1 of 1

Sample Number 24143380-2
Sampled Date Jun 23, 2025 9:42 AM
Sample Description Surface Water
Location ลำห้วยน้ำไหล(ห้วยมะนาว) ห่างจากจุดระบายน้ำโรงงานประมาณ 150 เมตร (W5)
Date Analysis Commenced Jun 25, 2025
Condition of Sample Contained in two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD	mg/L		2	7.0	≤1	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O C	Rayong

Guideline : 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)

n: Change from Natural condition not more than 3 degree C

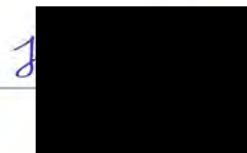
Sampling By : Jirayu Raengritdi

Remark :

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

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Analysis / Test Report

Client : WHA Industrial Development Public Company Limited
331/8-9 Moo 2, High Way 331 Road., KM 91-92, Tambol Bowin, Amphur Sriracha,
Chonburi Thailand 20230

P/O :

Project Name : Monitoring

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 24143380

Date Received : Jun 23, 2025

Date Reported : Jun 30, 2025

Report Number : 3348143-1

Page 1 of 1

Sample Number 24143380-2
Sampled Date Jun 23, 2025 9:42 AM
Sample Description Surface Water
Location ลำห้วยน้ำไหล(ห้วยมะนาว) ห่างจากจุดระบายน้ำโรงงานประมาณ 150 เมตร (W5)
Date Analysis Commenced Jun 24, 2025
Condition of Sample Contained in two plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL			24000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : 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)

n: Change from Natural condition not more than 3 degree C

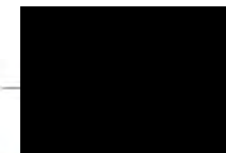
Sampling By : Jirayu Raengritdi

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.
- Sampling is not included in scope of accreditation ISO/IEC 17025

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ภาคผนวก ค-3

คุณลักษณะน้ำเสียก่อนและหลังเข้าระบบบำบัดน้ำเสียส่วนกลาง



Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

TESTING

No.0042

Lot ID: 24140958

Date Received : Jan 13, 2025

Date Reported : Jan 20, 2025

Report Number : 3194006-1

Page 1 of 2

Sample Number	24140958-1						
Sampled Date	Jan 13, 2025 9:30 AM						
Sample Description	Influent:						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	Jan 13, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA USEPA)						
Physical Property	Yellow, some odour, a lot of solid and no turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	13.5	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	45	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	26.8	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1508	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	7.6	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	17	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

TESTING

No.0042

Lot ID: 24140958

Date Received : Jan 13, 2025

Date Reported : Jan 20, 2025

Report Number : 3194006-1

Page 2 of 2

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Warunyooy Chimphalee ทะเบียนเลขที่ ว-323-จ-0020 , Samart Khumphlee ทะเบียนเลขที่ ว-204-จ-0084

Remark :

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- "c" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 24140958

Date Received : Jan 13, 2025

Date Reported : Jan 20, 2025

Report Number : 3194006-2

Page 1 of 1

Sample Number	24140958-1
Sampled Date	Jan 13, 2025 9:30 AM
Sample Description	Influent
Location	WHA CIE1 : Pumping Station
Date Analysis Commenced	Jan 13, 2025
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, a lot of solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Formaldehyde	mg/L	0.03	0.1	0.1	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed., 2004	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Warunyoo Chimphalee ทะเบียนเลขที่ ว-323-จ-0020 , Samart Khumphlee ทะเบียนเลขที่ ว-204-จ-0084

Remark :

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Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 24140958

Date Received : Jan 13, 2025

Date Reported : Jan 20, 2025

Report Number : 3194006-3

Page 1 of 2

Sample Number	24140958-1
Sampled Date	Jan 13, 2025 9:30 AM
Sample Description	Influent
Location	WHA CIE1 : Pumping Station
Date Analysis Commenced	Jan 14, 2025
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, a lot of solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.39	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	<0.0005	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.51	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Manager

ทะเบียนเลขที่ ว-204-จ-0007

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :
Project Name :
Project Location : WHA CIE 1



TESTING
No.0009
Lot ID: 24140958
Date Received : Jan 13, 2025
Date Reported : Jan 20, 2025
Report Number : 3194006-3

Page 2 of 2

Sample Number 24140958-1
Sampled Date Jan 13, 2025 9:30 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced Jan 14, 2025
Condition of Sample Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, a lot of solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.10	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	25.9	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Warunyoo Chimphalee ทะเบียนเลขที่ ว-323-จ-0020 , Samart Khumphlee ทะเบียนเลขที่ ว-204-จ-0084

Remark :

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Technical Management



Manager
ทะเบียนเลขที่ ว-204-จ-0007

Assistant General Manager
ทะเบียนเลขที่ ว-204-จ-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :
Project Name :
Project Location : WHA CIE 1



TESTING
No.0009
Lot ID: 24140958
Date Received : Jan 13, 2025
Date Reported : Jan 20, 2025
Report Number : 3194006-4

Page 1 of 1

Sample Number 24140958-1
Sampled Date Jan 13, 2025 9:30 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced Jan 13, 2025
Condition of Sample Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, a lot of solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	790000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.05	0.1	4.6	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	2248	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Warunyoo Chimphalee , Samart Khumphlee

Remark :

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 24140959

Date Received : Jan 13, 2025

Date Reported : Jan 20, 2025

Report Number : 3194010-1

Page 1 of 2

Sample Number	24140959-1						
Sampled Date	Jan 13, 2025 9:50 AM						
Sample Description	Effluent:						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	Jan 13, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	4.5	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	25	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	25.2	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	976	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	3.8	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	9	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 24140959

Date Received : Jan 13, 2025

Date Reported : Jan 20, 2025

Report Number : 3194010-1

Page 2 of 2

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampling By : Warunyooy Chimphalee ทะเบียนเลขที่ ว-323-จ-0020 , Samart Khumplhee ทะเบียนเลขที่ ว-204-จ-0084

Remark :

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Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 24140959

Date Received : Jan 13, 2025

Date Reported : Jan 20, 2025

Report Number : 3194010-2

Page 1 of 1

Sample Number	24140959-1
Sampled Date	Jan 13, 2025 9:50 AM
Sample Description	Effluent:
Location	WHA CIE1 : WWTP
Date Analysis Commenced	Jan 13, 2025
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1.0	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed., 2004	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Warunyoo Chimphalee ทะเบียนเลขที่ ว-323-จ-0020 , Samart Khumphlee ทะเบียนเลขที่ ว-204-จ-0084

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.

Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 24140959

Date Received : Jan 13, 2025

Date Reported : Jan 20, 2025

Report Number : 3194010-3

Page 1 of 2

Sample Number	24140959-1
Sampled Date	Jan 13, 2025 9:50 AM
Sample Description	Effluent
Location	WHA CIE1 : WWTP
Date Analysis Commenced	Jan 14, 2025
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.58	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.0008	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.08	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Manager

ทะเบียนเลขที่ ว-204-จ-0007

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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Analysis / Test Report

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331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :
Project Name :
Project Location : WHA CIE 1



TESTING
No.0009
Lot ID: 24140959
Date Received : Jan 13, 2025
Date Reported : Jan 20, 2025
Report Number : 3194010-3

Page 2 of 2

Sample Number 24140959-1
Sampled Date Jan 13, 2025 9:50 AM
Sample Description Effluent:
Location WHA CIE1 : WWTP
Date Analysis Commenced Jan 14, 2025
Condition of Sample Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.29	≤5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	16.4	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampling By : Warunyoo Chimphalee ทะเบียนเลขที่ ว-323-จ-0020, Samart Khumplinee ทะเบียนเลขที่ ว-204-จ-0084

Remark :
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Technical Management

Manager
ทะเบียนเลขที่ ว-204-จ-0007

Assistant General Manager
ทะเบียนเลขที่ ว-204-จ-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :
Project Name :
Project Location : WHA CIE 1

Lot ID: 24140959
Date Received : Jan 13, 2025
Date Reported : Jan 20, 2025
Report Number : 3194010-4

Page 1 of 1

Sample Number 24140959-1
Sampled Date Jan 13, 2025 9:50 AM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Jan 13, 2025
Condition of Sample Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.05	0.1	1.4	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	1555	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).
Sampling By : Warunyoo Chimphalee , Samart Khumplinee

Remark :
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 24140975

Date Received : Jan 13, 2025

Date Reported : Jan 20, 2025

Report Number : 3194027-1

Page 1 of 1

Sample Number	24140975-1						
Sampled Date	Jan 13, 2025 9:50 AM						
Sample Description	Effluent:						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	Jan 14, 2025						
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	70000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Samart Khumphee

Remark :

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Scientist (3)

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 24140970

Date Received : Jan 23, 2025

Date Reported : Aug 27, 2025

Report Number : 3392051-1

Page 1 of 2

Sample Number	24140970-1						
Sampled Date	Jan 23, 2025 10:30 AM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	Jan 23, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, solid and some turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	68.3	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	187	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	9	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.5	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	832	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	20.0	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	48	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Scientist (2)

หมายเลขที่ ๖-323-๖-0004

Senior Manager

หมายเลขที่ ๖-323-๖-0001

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 24140970

Date Received : Jan 23, 2025

Date Reported : Aug 27, 2025

Report Number : 3392051-1

Page 2 of 2

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Note : This Analysis test report is reissued to supersede report No.3194022-2, Date Reported : Jan 30, 2025 due to revise analytical information.

Sampling By : Wasan Kinunti ทะเบียนเลขที่ ว-323-จ-0019 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (2)

ทะเบียนเลขที่ ว-323-จ-0004

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0009
Lot ID: 24140970

Date Received : Jan 23, 2025

Date Reported : Aug 27, 2025

Report Number : 3392051-2

Page 1 of 2

Sample Number	24140970-1						
Sampled Date	Jan 23, 2025 10:30 AM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	Jan 24, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, solid and some turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.001	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.002	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.02	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Zinc	mg/L	0.003	0.005	0.22	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Water Testing							

Technical Management

Section Head

ทะเบียนเลขที่ ว-204-จ-0013

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0009
Lot ID: 24140970

Date Received : Jan 23, 2025

Date Reported : Aug 27, 2025

Report Number : 3392051-2

Page 2 of 2

Sample Number	24140970-1
Sampled Date	Jan 23, 2025 10:30 AM
Sample Description	Influent
Location	WHA CIE1 : Pumping Station
Date Analysis Commenced	Jan 24, 2025
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	6.4	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Note : This Analysis test report is issued to supersede report No.3194022-2, Date Reported : Jan 30, 2025 due to revise analytical information.

Sampling By : Wasan Kinunti ทะเบียนเลขที่ ว-323-จ-0019 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

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Technical Management

Section Head

ทะเบียนเลขที่ ว-204-จ-0013

Assistant General Manager

ทะเบียนเลขที่ ว-204-จ-0004

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0009
Lot ID: 24140970

Date Received : Jan 23, 2025

Date Reported : Aug 27, 2025

Report Number : 3392051-3

Page 1 of 1

Sample Number	24140970-1
Sampled Date	Jan 23, 2025 10:30 AM
Sample Description	Influent
Location	WHA CIE1 : Pumping Station
Date Analysis Commenced	Jan 24, 2025
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	4900000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Water Testing							
Ammonia Nitrogen *	mg/L	0.05	0.1	15.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	1501	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Note : This Analysis test report is issued to supersede report No.3194022-3, Date Reported : Jan 30, 2025 due to revise analytical information.

Sampling By : Wasan Kinunti , Pattarapol Sawangjaitam

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Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2510835

Date Received : Jan 31, 2025

Date Reported : Feb 05, 2025

Report Number : 3225690-1

Page 1 of 1

Sample Number : 2510835-1
Sampled Date : Jan 31, 2025 2:30 PM
Sample Description : Influent
Location : WHA CIE1 : Pumping Station
Date Analysis Commenced : Feb 01, 2025
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							
Copper	mg/L	0.0003	0.0005	0.97	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Samart Khumphlee ทะเบียนเลขที่ ว-204-จ-0084

Remark :

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Technical Management

Manager
ทะเบียนเลขที่ ว-204-จ-0007

Assistant General Manager
ทะเบียนเลขที่ ว-204-จ-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 24140971

Date Received : Jan 23, 2025

Date Reported : Jan 30, 2025

Report Number : 3194024-1

Page 1 of 2

Sample Number : 24140971-1
Sampled Date : Jan 23, 2025 10:40 AM
Sample Description : Effluent
Location : WHA CIE1 : WWTP
Date Analysis Commenced : Jan 23, 2025
Condition of Sample : Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	12.1	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	35	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.3	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	880	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	10.6	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	11	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Scientist (4)
ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager
ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 24140971

Date Received : Jan 23, 2025

Date Reported : Jan 30, 2025

Report Number : 3194024-1

Page 2 of 2

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Wasan Kinunti ทะเบียนเลขที่ ร-323-จ-0019 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ร-204-จ-0002

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management

Scientist (4)

ทะเบียนเลขที่ ร-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ร-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0009
Lot ID: 24140971

Date Received : Jan 23, 2025

Date Reported : Jan 30, 2025

Report Number : 3194024-2

Page 1 of 2

Sample Number : 24140971-1
Sampled Date : Jan 23, 2025 10:40 AM
Sample Description : Effluent
Location : WHA CIE1 : WWTP
Date Analysis Commenced : Jan 24, 2025
Condition of Sample : Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.82	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.001	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.45	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Manager

ทะเบียนเลขที่ ร-204-จ-0007

Assistant General Manager

ทะเบียนเลขที่ ร-204-ค-0004

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 24140971

Date Received : Jan 23, 2025

Date Reported : Jan 30, 2025

Report Number : 3194024-2

Page 2 of 2

Sample Number 24140971-1
Sampled Date Jan 23, 2025 10:40 AM
Sample Description Effluent:
Location WHA CIE1 : WWTP
Date Analysis Commenced Jan 24, 2025
Condition of Sample Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.22	≤5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	14.9	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Wasan Kinunti ทะเบียนเลขที่ ๖-323-๖-0019 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

Remark :

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Technical Management

Manager

ทะเบียนเลขที่ ๖-204-๖-0007

Assistant General Manager

ทะเบียนเลขที่ ๖-204-๖-0004

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 24140971

Date Received : Jan 23, 2025

Date Reported : Jan 30, 2025

Report Number : 3194024-3

Page 1 of 1

Sample Number 24140971-1
Sampled Date Jan 23, 2025 10:40 AM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Jan 24, 2025
Condition of Sample Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.05	0.1	6.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	1598	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Wasan Kinunti , Pattarapol Sawangjaitam

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 24140979

Date Received : Jan 23, 2025

Date Reported : Jan 30, 2025

Report Number : 3194029-1

Page 1 of 1

Sample Number	24140979-1						
Sampled Date	Jan 23, 2025 10:40 AM						
Sample Description	Effluent:						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	Jan 24, 2025						
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	7000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Pattarapol Sawangjaitam

Remark :

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 257577

Date Received : Feb 03, 2025

Date Reported : Feb 10, 2025

Report Number : 3219902-1

Page 1 of 2

Sample Number	257577-1						
Sampled Date	Feb 03, 2025 9:45 AM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	Feb 03, 2025						
Condition of Sample	Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	23.3	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	55	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	0.5	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed., 2004	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.2	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.1	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	932	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	9.7	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong

Technical Management

Scientist (3)

ทะเบียนเลขที่ ๖-323-๖-0031

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042

Lot ID: 257577

Date Received : Feb 03, 2025

Date Reported : Feb 10, 2025

Report Number : 3215902-1

Page 2 of 2

Sample Number : 257577-1
Sampled Date : Feb 03, 2025 9:45 AM
Sample Description : Influent
Location : WHA CIE1 : Pumping Station
Date Analysis Commenced : Feb 03, 2025
Condition of Sample : Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	13	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Bkkachai Tuntong ทะเบียนเลขที่ ๖-323-๖-0022 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

Remark :

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Technical Management

Scientist (3)

ทะเบียนเลขที่ ๖-323-๖-0031

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0009

Lot ID: 257577

Date Received : Feb 03, 2025

Date Reported : Feb 10, 2025

Report Number : 3219902-2

Page 1 of 2

Sample Number : 257577-1
Sampled Date : Feb 03, 2025 9:45 AM
Sample Description : Influent
Location : WHA CIE1 : Pumping Station
Date Analysis Commenced : Feb 04, 2025
Condition of Sample : Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.0009	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	1.45	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	<0.0005	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.05	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Section Head

ทะเบียนเลขที่ ๖-204-๖-0008

Assistant General Manager

ทะเบียนเลขที่ ๖-204-๖-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 257577

Date Received : Feb 03, 2025

Date Reported : Feb 10, 2025

Report Number : 3215902-2

Page 2 of 2

Sample Number : 257577-1
Sampled Date : Feb 03, 2025 9:45 AM
Sample Description : Influent
Location : WHA CIE1 : Pumping Station
Date Analysis Commenced : Feb 04, 2025
Condition of Sample : Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.26	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	8.5	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Ekkachai Tuntong ทะเบียนเลขที่ ว-323-จ-0022 , 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.

Technical Management

Section Head

ทะเบียนเลขที่ ว-204-จ-0008

ทะเบียนเลขที่ ว-204-จ-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 257577

Date Received : Feb 03, 2025

Date Reported : Feb 10, 2025

Report Number : 3219902-3

Page 1 of 1

Sample Number : 257577-1
Sampled Date : Feb 03, 2025 9:45 AM
Sample Description : Influent
Location : WHA CIE1 : Pumping Station
Date Analysis Commenced : Feb 04, 2025
Condition of Sample : Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, a lot of odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	240000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen	mg/L	0.05	0.1	6.2	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	1595	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Ekkachai Tuntong , Pattarapol Sawangjaitam

Remark :

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

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Approved by

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

TESTING
No.0042

Lot ID: 257579

Date Received : Feb 03, 2025

Date Reported : Feb 10, 2025

Report Number : 3215904-1

Page 1 of 2

Sample Number 257579-1
Sampled Date Feb 03, 2025 10:00 AM
Sample Description Effluent:
Location WHA CIE1 : WWTP
Date Analysis Commenced Feb 03, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	9.4	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	43	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1.0	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed., 2004	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.2	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1020	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	7.5	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong

Technical Management

Scientist (3)

ทะเบียนเลขที่ ว-323-จ-0031

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

TESTING
No.0042

Lot ID: 257579

Date Received : Feb 03, 2025

Date Reported : Feb 10, 2025

Report Number : 3219904-1

Page 2 of 2

Sample Number 257579-1
Sampled Date Feb 03, 2025 10:00 AM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Feb 03, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Ekkachai Tuntong ทะเบียนเลขที่ ว-323-จ-0022 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

Technical Management

Scientist (3)

ทะเบียนเลขที่ ว-323-จ-0031

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 257579

Date Received : Feb 03, 2025

Date Reported : Feb 10, 2025

Report Number : 3215904-2

Page 1 of 2

Sample Number : 257579-1
Sampled Date : Feb 03, 2025 10:00 AM
Sample Description : Effluent
Location : WHA CIE1 : WWTP
Date Analysis Commenced : Feb 04, 2025
Condition of Sample : Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.001	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.53	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.0009	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.07	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Section Head

ทะเบียนเลขที่ ว-204-จ-0008

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 257579

Date Received : Feb 03, 2025

Date Reported : Feb 10, 2025

Report Number : 3219904-2

Page 2 of 2

Sample Number : 257579-1
Sampled Date : Feb 03, 2025 10:00 AM
Sample Description : Effluent
Location : WHA CIE1 : WWTP
Date Analysis Commenced : Feb 04, 2025
Condition of Sample : Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.56	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	13.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Ekkachai Tuntong ทะเบียนเลขที่ ว-323-จ-0022 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

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- "c" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.

Technical Management

Section Head

ทะเบียนเลขที่ ว-204-จ-0008

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 257579

Date Received : Feb 03, 2025

Date Reported : Feb 10, 2025

Report Number : 3215904-3

Page 1 of 1

Sample Number	257579-1						
Sampled Date	Feb 03, 2025 10:00 AM						
Sample Description	Effluent:						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	Feb 04, 2025						
Condition of Sample	Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA USEPA)						
Physical Property	Yellow, some odour, solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.05	0.1	4.8	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	1669	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

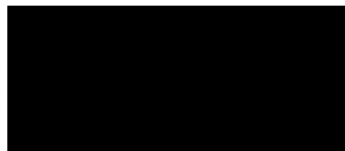
Sampling By : Ekkachai Tuntong , Pattarapol Sawangjaitam

Remark :

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 257610

Date Received : Feb 03, 2025

Date Reported : Feb 10, 2025

Report Number : 3219948-1

Page 1 of 1

Sample Number	257610-1						
Sampled Date	Feb 03, 2025 10:00 AM						
Sample Description	Effluent						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	Feb 04, 2025						
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA USEPA)						
Physical Property	Yellow, some odour, solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	330.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Pattarapol Sawangjaitam

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 257606

Date Received : Feb 17, 2025

Date Reported : Feb 24, 2025

Report Number : 3215943-1

Page 1 of 2

Sample Number	257606-1						
Sampled Date	Feb 17, 2025 1:30 PM						
Sample Description	Influent:						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	Feb 17, 2025						
Condition of Sample	Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, solid and some turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	36.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	66	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	31.5	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	692	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	8.8	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	16	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 257606

Date Received : Feb 17, 2025

Date Reported : Feb 24, 2025

Report Number : 3219943-1

Page 2 of 2

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Wasan Kinunti ทะเบียนเลขที่ ว-323-จ-0019 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

- LOD : Limit of Detection
- "c" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 257606

Date Received : Feb 17, 2025

Date Reported : Feb 24, 2025

Report Number : 3215943-2

Page 1 of 2

Sample Number : 257606-1
Sampled Date : Feb 17, 2025 1:30 PM
Sample Description : Influent
Location : WHA CIE1 : Pumping Station
Date Analysis Commenced : Feb 18, 2025
Condition of Sample : Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.001	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.50	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.001	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.05	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Scientist (3)

ทะเบียนเลขที่ ว-204-จ-0018

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 257606

Date Received : Feb 17, 2025

Date Reported : Feb 24, 2025

Report Number : 3219943-2

Page 2 of 2

Sample Number : 257606-1
Sampled Date : Feb 17, 2025 1:30 PM
Sample Description : Influent
Location : WHA CIE1 : Pumping Station
Date Analysis Commenced : Feb 18, 2025
Condition of Sample : Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.45	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	10.5	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Wasan Kinunti ทะเบียนเลขที่ ว-323-จ-0019 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

- LOD : Limit of Detection
- "c" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (3)

ทะเบียนเลขที่ ว-204-จ-0018

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 257606

Date Received : Feb 17, 2025

Date Reported : Feb 24, 2025

Report Number : 3215943-3

Page 1 of 1

Sample Number 257606-1
Sampled Date Feb 17, 2025 1:30 PM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced Feb 18, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	790000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.05	0.1	5.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	1241	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Wasan Kinunti , Pattarapol Sawangjaitam

Remark :

- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- Sampling is not included in scope of accreditation ISO/IEC 17025

Approved by

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 257608

Date Received : Feb 17, 2025

Date Reported : Feb 24, 2025

Report Number : 3219945-1

Page 1 of 2

Sample Number 257608-1
Sampled Date Feb 17, 2025 1:40 PM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Feb 17, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	9.1	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	30	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	31.7	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	916	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	8.1	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042

Lot ID: 257608

Date Received : Feb 17, 2025

Date Reported : Feb 24, 2025

Report Number : 3215945-1

Page 2 of 2

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Wasan Kinunti ทะเบียนเลขที่ ร-323-ก-0019 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ร-204-ก-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.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (4)

ทะเบียนเลขที่ ร-323-ก-0028

Senior Manager

ทะเบียนเลขที่ ร-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0009

Lot ID: 257608

Date Received : Feb 17, 2025

Date Reported : Feb 24, 2025

Report Number : 3219945-2

Page 1 of 2

Sample Number : 257608-1
Sampled Date : Feb 17, 2025 1:40 PM
Sample Description : Effluent
Location : WHA CIE1 : WWTP
Date Analysis Commenced : Feb 18, 2025
Condition of Sample : Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.54	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.0006	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.08	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Section Head

ทะเบียนเลขที่ ร-204-ก-0008

Assistant General Manager

ทะเบียนเลขที่ ร-204-ค-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 257608

Date Received : Feb 17, 2025

Date Reported : Feb 24, 2025

Report Number : 3215945-2

Page 2 of 2

Sample Number 257608-1
Sampled Date Feb 17, 2025 1:40 PM
Sample Description Effluent:
Location WHA CIE1 : WWTP
Date Analysis Commenced Feb 18, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.66	≤5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	13.9	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Wasan Kinunti ทะเบียนเลขที่ ๖-323-๖-0019 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

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.
- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management



ทะเบียนเลขที่ ๖-204-๖-0008

ทะเบียนเลขที่ ๖-204-๖-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 257608

Date Received : Feb 17, 2025

Date Reported : Feb 24, 2025

Report Number : 3219945-3

Page 1 of 1

Sample Number 257608-1
Sampled Date Feb 17, 2025 1:40 PM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Feb 18, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.05	0.1	5.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	1550	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

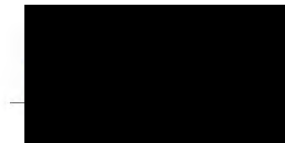
Sampling By : Wasan Kinunti , Pattarapol Sawangjaitam

Remark :

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 257611

Date Received : Feb 17, 2025

Date Reported : Feb 24, 2025

Report Number : 3215950-1

Page 1 of 1

Sample Number	257611-1						
Sampled Date	Feb 17, 2025 1:40 PM						
Sample Description	Effluent:						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	Feb 18, 2025						
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	13000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Pattarapol Sawangjaitam

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.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Approved by

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 2517695

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3242636-1

Page 1 of 2

Sample Number	2517695-1						
Sampled Date	Mar 03, 2025 9:39 AM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	Mar 03, 2025						
Condition of Sample	Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, a lot of solid and some turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	19.1	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	77	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.8	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	860	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	11.9	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	19	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

ทะเบียนเลขที่ ว-323-ว-0031

ทะเบียนเลขที่ ว-323-ว-0001

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TESTING
No.0042

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location: WHA CIE 1

Lot ID: 2517695

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3242636-1

Page 2 of 2

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ๖-323-๖-0030 , Samart Khumplinee ทะเบียนเลขที่ ๖-204-๖-0084

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.
- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (3)

ทะเบียนเลขที่ ๖-323-๖-0031

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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TESTING
No.0009

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location: WHA CIE 1

Lot ID: 2517695

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3242636-2

Page 1 of 2

Sample Number	2517695-1						
Sampled Date	Mar 03, 2025 9:39 AM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	Mar 04, 2025						
Condition of Sample	Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, a lot of solid and some turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.94	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.0006	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.01	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Manager

ทะเบียนเลขที่ ๖-204-๖-0007

Assistant General Manager

ทะเบียนเลขที่ ๖-204-๖-0004

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TESTING
No.0009

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517695

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3242636-2

Page 2 of 2

Sample Number	2517695-1						
Sampled Date	Mar 03, 2025 9:39 AM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	Mar 04, 2025						
Condition of Sample	Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, a lot of solid and some turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.28	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	21.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ 7-323-จ-0030 , Samart Khumplhee ทะเบียนเลขที่ 7-204-จ-0084

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- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management

ทะเบียนเลขที่ 7-204-จ-0007

ทะเบียนเลขที่ 7-204-จ-0004

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TESTING
No.0009

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517695

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3242636-3

Page 1 of 1

Sample Number	2517695-1						
Sampled Date	Mar 03, 2025 9:39 AM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	Mar 03, 2025						
Condition of Sample	Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, a lot of solid and some turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	3300000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.05	0.1	6.2	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	1501	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Pitthaya Thongtaeng , Samart Khumplhee

Remark :

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Approved by

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TESTING
No.0042

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517695

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3242636-4

Page 1 of 1

Sample Number	2517695-1
Sampled Date	Mar 03, 2025 9:39 AM
Sample Description	Influent
Location	WHA CIE1 : Pumping Station
Date Analysis Commenced	Mar 04, 2025
Condition of Sample	Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, a lot of solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed., 2004	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ร-323-จ-0030 , Samart Khumphlee ทะเบียนเลขที่ ร-204-จ-0084

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (3)

ทะเบียนเลขที่ ร-323-จ-0031

Senior Manager

ทะเบียนเลขที่ ร-323-จ-0001

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TESTING
No.0042

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517697

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3242637-1

Page 1 of 2

Sample Number	2517697-1
Sampled Date	Mar 03, 2025 9:55 AM
Sample Description	Effluent
Location	WHA CIE1 : WWTP
Date Analysis Commenced	Mar 03, 2025
Condition of Sample	Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, no solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	7.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	35	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	31.4	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	904	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	6.9	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Scientist (3)

ทะเบียนเลขที่ ร-323-จ-0031

Senior Manager

ทะเบียนเลขที่ ร-323-จ-0001

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TESTING
No.0042

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517697

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3242637-1

Page 2 of 2

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ๖-323-๖-0030 , Samart Khumphlee ทะเบียนเลขที่ ๖-204-๖-0084

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (3)

ทะเบียนเลขที่ ๖-323-๖-0031

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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TESTING
No.0009

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517697

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3242637-2

Page 1 of 2

Sample Number 2517697-1
Sampled Date Mar 03, 2025 9:55 AM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Mar 04, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, no solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.46	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	<0.0005	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.09	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Manager

ทะเบียนเลขที่ ๖-204-๖-0007

Assistant General Manager

ทะเบียนเลขที่ ๖-204-๖-0004

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TESTING
No.0009

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517697

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3242637-2

Sample Number	2517697-1						
Sampled Date	Mar 03, 2025 9:55 AM						
Sample Description	Effluent						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	Mar 04, 2025						
Condition of Sample	Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, no solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.28	≤5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-0030 , Samart Khumphlee ทะเบียนเลขที่ ว-204-จ-0084

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- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management



Manager
ทะเบียนเลขที่ ว-204-จ-0007

Assistant General Manager
ทะเบียนเลขที่ ว-204-จ-0004

Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. The report shall not be reproduced except in full without the written approval of the laboratory.

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517697

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3242637-3

Sample Number	2517697-1						
Sampled Date	Mar 03, 2025 9:55 AM						
Sample Description	Effluent						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	Mar 03, 2025						
Condition of Sample	Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, no solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.05	0.1	4.4	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	1577	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong
Total Phosphorus as P	mg/L	0.2	0.5	14.3	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ว-323-จ-0030 , Samart Khumphlee ทะเบียนเลขที่ ว-204-จ-0084

Remark :

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

Technical Management



Scientist (3)
ทะเบียนเลขที่ ว-323-จ-0031

Senior Manager
ทะเบียนเลขที่ ว-204-จ-0001

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TESTING
No.0042

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517697

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3242637-4

Page 1 of 1

Sample Number	2517697-1						
Sampled Date	Mar 03, 2025 9:55 AM						
Sample Description	Effluent						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	Mar 04, 2025						
Condition of Sample	Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, no solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1.0	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed., 2004	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Pitthaya Thongtaeng ทะเบียนเลขที่ ร-323-ก-0030 , Samart Khumplhee ทะเบียนเลขที่ ร-204-ก-0084

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.
- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (3)

ทะเบียนเลขที่ ร-323-ก-0031

Senior Manager

ทะเบียนเลขที่ ร-323-ก-0001

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ISO/IEC 17025
Accreditation No. 1031/47

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517711

Date Received : Mar 03, 2025

Date Reported : Mar 10, 2025

Report Number : 3242651-1

Page 1 of 1

Sample Number	2517711-1						
Sampled Date	Mar 03, 2025 9:55 AM						
Sample Description	Effluent						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	Mar 04, 2025						
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, no solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	3300.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Samart Khumplhee

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.
- Sampling is not included in scope of accreditation ISO/IEC 17025

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Approved by

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TESTING
No.0042

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517704

Date Received : Mar 17, 2025

Date Reported : Mar 24, 2025

Report Number : 3242645-1

Page 1 of 2

Sample Number 2517704-1
Sampled Date Mar 17, 2025 1:45 PM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced Mar 17, 2025
Condition of Sample Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	30.2	≤500	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	72	≤750	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	31.6	≤45	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	664	≤3000	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	10.8	≤100	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	15	≤200	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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TESTING
No.0042

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517704

Date Received : Mar 17, 2025

Date Reported : Mar 24, 2025

Report Number : 3242645-1

Page 2 of 2

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Wasan Kinunti ทะเบียนเลขที่ ว-323-จ-0019 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

- LOD : Limit of Detection
- "c" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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TESTING
No.0009

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517704

Date Received : Mar 17, 2025

Date Reported : Mar 24, 2025

Report Number : 3242645-2

Page 1 of 2

Sample Number	2517704-1						
Sampled Date	Mar 17, 2025 1:45 PM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	Mar 18, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, solid and some turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.38	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.001	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	<0.0005	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.006	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Manager

ทะเบียนเลขที่ ว-204-จ-0007

Assistant General Manager

ทะเบียนเลขที่ ว-204-จ-0004

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TESTING
No.0009

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517704

Date Received : Mar 17, 2025

Date Reported : Mar 24, 2025

Report Number : 3242645-2

Page 2 of 2

Sample Number	2517704-1						
Sampled Date	Mar 17, 2025 1:45 PM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	Mar 18, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, solid and some turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.22	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	1.6	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Wasan Kinunti ทะเบียนเลขที่ ว-323-จ-0019 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

- LOD : Limit of Detection
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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Manager

ทะเบียนเลขที่ ว-204-จ-0007

Assistant General Manager

ทะเบียนเลขที่ ว-204-จ-0004

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TESTING
No.0009

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517704

Date Received : Mar 17, 2025

Date Reported : Mar 24, 2025

Report Number : 3242645-3

Page 1 of 1

Sample Number	2517704-1						
Sampled Date	Mar 17, 2025 1:45 PM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	Mar 17, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, solid and some turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	3300000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.05	0.1	6.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	1185	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Wasan Kinunti , Pattarapol Sawangjaitam

Remark :

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Section Head

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TESTING
No.0042

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517707

Date Received : Mar 17, 2025

Date Reported : Mar 24, 2025

Report Number : 3242646-1

Page 1 of 2

Sample Number	2517707-1						
Sampled Date	Mar 17, 2025 2:01 PM						
Sample Description	Effluent						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	Mar 17, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, solid and some turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	7.2	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	27	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C	-	-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	32.0	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1170	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	8.6	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	6	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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TESTING
No.0042

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517707

Date Received : Mar 17, 2025

Date Reported : Mar 24, 2025

Report Number : 3242646-1

Page 2 of 2

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Wasan Kinunti ทะเบียนเลขที่ ว-323-จ-0019 , 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.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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TESTING
No.0009

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517707

Date Received : Mar 17, 2025

Date Reported : Mar 24, 2025

Report Number : 3242646-2

Page 1 of 2

Sample Number 2517707-1
Sampled Date Mar 17, 2025 2:01 PM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Mar 18, 2025
Condition of Sample Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.39	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.001	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.05	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Manager

ทะเบียนเลขที่ ว-204-จ-0007

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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TESTING
No.0009

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517707

Date Received : Mar 17, 2025

Date Reported : Mar 24, 2025

Report Number : 3242646-2

Page 2 of 2

Sample Number	2517707-1						
Sampled Date	Mar 17, 2025 2:01 PM						
Sample Description	Effluent						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	Mar 18, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, solid and some turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.32	≤5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	16.8	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Wasan Kinunti ทะเบียนเลขที่ ๖-323-๖-0019 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

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.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Manager
ทะเบียนเลขที่ ๖-204-๖-0007

Assistant General Manager
ทะเบียนเลขที่ ๖-204-๖-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited

331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2517707

Date Received : Mar 17, 2025

Date Reported : Mar 24, 2025

Report Number : 3242646-3

Page 1 of 1

Sample Number	2517707-1						
Sampled Date	Mar 17, 2025 2:01 PM						
Sample Description	Effluent						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	Mar 17, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, solid and some turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.05	0.1	6.1	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	1701	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Wasan Kinunti , Pattarapol Sawangjaitam

Remark :

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Scientist (4)

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TESTING
No.0009

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :
Project Name :
Project Location : WHA CIE 1

Lot ID: 2517712
Date Received : Mar 17, 2025
Date Reported : Mar 24, 2025
Report Number : 3242650-1

Page 1 of 1

Sample Number 2517712-1
Sampled Date Mar 17, 2025 2:01 PM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Mar 18, 2025
Condition of Sample Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	3300.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Pattarapol Sawangjaitam

Remark :
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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is no; included in scope of accreditation ISO/IEC 17025

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Analysis / Test Report

TESTING
No.0042

Lot ID: 2527728
Date Received : Apr 07, 2025
Date Reported : Apr 14, 2025
Report Number : 3264693-1

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

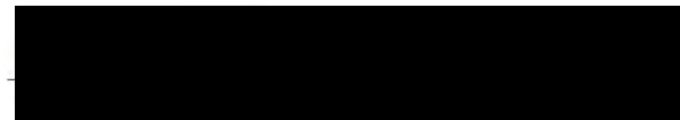
P/O :
Project Name :
Project Location : WHA CIE 1

Page 1 of 2

Sample Number 2527728-1
Sampled Date Apr 07, 2025 9:50 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced Apr 07, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	13.5	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	53	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.8	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	924	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	7.2	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	12	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management



ทะเบียนเลขที่ ร-323-จ-0028

ทะเบียนเลขที่ ร-323-จ-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2527728

Date Received : Apr 07, 2025

Date Reported : Apr 14, 2025

Report Number : 3264693-1

Page 2 of 2

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Bkkachai Tuntong ทะเบียนเลขที่ ว-323-จ-0022, Pattarapol Sawangjailam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0009
Lot ID: 2527728

Date Received : Apr 07, 2025

Date Reported : Apr 17, 2025

Report Number : 3264693-2

Page 1 of 2

Sample Number 2527728-1
Sampled Date Apr 07, 2025 9:50 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced Apr 08, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.004	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.23	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.0006	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	<0.0005	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.06	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Scientist (3)

ทะเบียนเลขที่ ว-204-จ-0018

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2527728

Date Received : Apr 07, 2025

Date Reported : Apr 17, 2025

Report Number : 3264693-2

Page 2 of 2

Sample Number 2527728-1
Sampled Date Apr 07, 2025 9:50 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced Apr 08, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.43	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	6.6	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Ekkachai Tuntong ทะเบียนเลขที่ ร-323-จ-0022 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ร-204-จ-0002

Remark :

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- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management



ทะเบียนเลขที่ ร-204-จ-0018

ทะเบียนเลขที่ ร-204-จ-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2527728

Date Received : Apr 07, 2025

Date Reported : Apr 16, 2025

Report Number : 3264693-3

Page 1 of 1

Sample Number 2527728-1
Sampled Date Apr 07, 2025 9:50 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced Apr 07, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	220000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.05	0.1	4.9	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	1569	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Ekkachai Tuntong , Pattarapol Sawangjaitam

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042

Lot ID: 2527728

Date Received : Apr 07, 2025

Date Reported : Apr 14, 2025

Report Number : 3264693-4

Page 1 of 1

Sample Number 2527728-1
Sampled Date Apr 07, 2025 9:50 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced Apr 08, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Formaldehyde	mg/L	0.03	0.1	<0.1	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed., 2004	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Bkkachai Tuntong ทะเบียนเลขที่ ๖-323-๖-0022 . Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

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.
- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042

Lot ID: 2527730

Date Received : Apr 07, 2025

Date Reported : Apr 14, 2025

Report Number : 3264694-1

Page 1 of 2

Sample Number 2527730-1
Sampled Date Apr 07, 2025 10:05 AM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Apr 07, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, no solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	5.5	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	41	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	32.0	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1004	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	10.7	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	<5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2527730

Date Received : Apr 07, 2025

Date Reported : Apr 14, 2025

Report Number : 3264694-1

Page 2 of 2

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Bkkachai Tuntong ทะเบียนเลขที่ ว-323-จ-0022. Pattarapol Sawangjailam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0009
Lot ID: 2527730

Date Received : Apr 07, 2025

Date Reported : Apr 17, 2025

Report Number : 3264694-2

Page 1 of 2

Sample Number 2527730-1
Sampled Date Apr 07, 2025 10:05 AM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Apr 08, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, no solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.33	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.0009	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	<0.0005	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.06	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Scientist (3)

ทะเบียนเลขที่ ว-204-จ-0018

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2527730

Date Received : Apr 07, 2025

Date Reported : Apr 17, 2025

Report Number : 3264694-2

Page 2 of 2

Sample Number 2527730-1
Sampled Date Apr 07, 2025 10:05 AM
Sample Description Effluent:
Location WHA CIE1 : WWTP
Date Analysis Commenced Apr 08, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, no solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.28	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	21.5	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Ekkachai Tuntong ทะเบียนเลขที่ ว-323-ว-0022. Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-ว-0002

Remark :

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- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (3)

ทะเบียนเลขที่ ว-204-ว-0018

Assistant General Manager

ทะเบียนเลขที่ ว-204-ว-0004

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2527730

Date Received : Apr 07, 2025

Date Reported : Apr 14, 2025

Report Number : 3264694-3

Page 1 of 1

Sample Number 2527730-1
Sampled Date Apr 07, 2025 10:05 AM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Apr 07, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, no solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.05	0.1	8.4	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	1635	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Ekkachai Tuntong , Pattarapol Sawangjaitam

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 2527730

Date Received : Apr 07, 2025

Date Reported : Apr 14, 2025

Report Number : 3264694-4

Page 1 of 1

Sample Number	2527730-1
Sampled Date	Apr 07, 2025 10:05 AM
Sample Description	Effluent:
Location	WHA CIE1 : WWTP
Date Analysis Commenced	Apr 08, 2025
Condition of Sample	Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA USEPA)
Physical Property	Yellow, some odour, no solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1.0	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed., 2004	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Ekkachai Tuntong ทะเบียนเลขที่ ๖-323-๖-0022 . Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

Remark :

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Technical Management

Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2527769

Date Received : Apr 07, 2025

Date Reported : Apr 12, 2025

Report Number : 3264728-1

Page 1 of 1

Sample Number	2527769-1
Sampled Date	Apr 07, 2025 10:05 AM
Sample Description	Effluent
Location	WHA CIE1 : WWTP
Date Analysis Commenced	Apr 08, 2025
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA USEPA)
Physical Property	Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	790.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Pattarapol Sawangjaitam

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Approved by

Section Head

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 2527739

Date Received : Apr 21, 2025

Date Reported : Apr 28, 2025

Report Number : 3264704-1

Page 1 of 2

Sample Number	2527739-1
Sampled Date	Apr 21, 2025 9:37 AM
Sample Description	Influent:
Location	WHA CIE1 : Pumping Station
Date Analysis Commenced	Apr 21, 2025
Condition of Sample	Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA USEPA)
Physical Property	Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	18.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	71	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	4	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.4	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.9	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	496	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	14.6	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	19	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-ว-0028

Senior Manager

ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 2527739

Date Received : Apr 21, 2025

Date Reported : Apr 28, 2025

Report Number : 3264704-1

Page 2 of 2

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Warunyo Chimphalee ทะเบียนเลขที่ ว-323-ว-0020 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ว-0084

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Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-ว-0028

Senior Manager

ทะเบียนเลขที่ ว-323-ว-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2527739

Date Received : Apr 21, 2025

Date Reported : Apr 28, 2025

Report Number : 3264704-2

Page 1 of 2

Sample Number 2527739-1
Sampled Date Apr 21, 2025 9:37 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced Apr 22, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.003	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.16	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.003	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.03	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Section Head

ทะเบียนเลขที่ ว-204-จ-0013

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2527739

Date Received : Apr 21, 2025

Date Reported : Apr 28, 2025

Report Number : 3264704-2

Page 2 of 2

Sample Number 2527739-1
Sampled Date Apr 21, 2025 9:37 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced Apr 22, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.34	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	28.4	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Warunyoo Chimphalee ทะเบียนเลขที่ ว-323-จ-0020 , Samart Khumphlee ทะเบียนเลขที่ ว-204-ค-0084

Remark :

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Technical Management

Section Head

ทะเบียนเลขที่ ว-204-จ-0013

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2527739

Date Received : Apr 21, 2025

Date Reported : Apr 28, 2025

Report Number : 3264704-3

Page 1 of 1

Sample Number	2527739-1						
Sampled Date	Apr 21, 2025 9:37 AM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	Apr 21, 2025						
Condition of Sample	Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, some solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	240000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.05	0.1	10.8	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	975	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

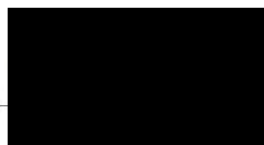
Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Warunyoo Chimphalee , Samart Khumphlee

Remark :
- LOD : Limit of Detection
- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- Sampling is not included in scope of accreditation ISO/IEC 17025

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 2527766

Date Received : Apr 21, 2025

Date Reported : Apr 28, 2025

Report Number : 3264725-1

Page 1 of 2

Sample Number	2527766-1						
Sampled Date	Apr 21, 2025 9:46 AM						
Sample Description	Effluent						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	Apr 21, 2025						
Condition of Sample	Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, solid and some turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	7.4	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	31	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	31.1	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1100	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	5.7	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	8	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management



Scientist (4)
ทะเบียนเลขที่ ๖-323-๖-0028

Senior Manager
ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2527766

Date Received : Apr 21, 2025
Date Reported : Apr 28, 2025
Report Number : 3264725-1

Page 2 of 2

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Warunyoo Chimphalee ทะเบียนเลขที่ ว-323-จ-0020 , Samart Khumphlee ทะเบียนเลขที่ ว-204-จ-0084

Remark :

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- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0009

Lot ID: 2527766

Date Received : Apr 21, 2025
Date Reported : Apr 28, 2025
Report Number : 3264725-2

Page 1 of 2

Sample Number 2527766-1
Sampled Date Apr 21, 2025 9:46 AM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Apr 22, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.005	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.29	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.0009	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.11	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Section Head

ทะเบียนเลขที่ ว-204-จ-0013

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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TESTING
No.0009

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2527766

Date Received : Apr 21, 2025

Date Reported : Apr 28, 2025

Report Number : 3264725-2

Page 2 of 2

Sample Number 2527766-1
Sampled Date Apr 21, 2025 9:46 AM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Apr 22, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.14	≤5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	27.4	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Warunyoo Chimphalee ทะเบียนเลขที่ ว-323-จ-0020 , Samart Khumphlee ทะเบียนเลขที่ ว-204-จ-0084

Remark :

- LOD : Limit of Detection
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Technical Management

Section Head

ทะเบียนเลขที่ ว-204-จ-0013

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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TESTING
No.0042

Lot ID: 2527766

Date Received : Apr 21, 2025

Date Reported : Apr 28, 2025

Report Number : 3264725-3

Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Page 1 of 1

Sample Number 2527766-1
Sampled Date Apr 21, 2025 9:46 AM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Apr 21, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, solid and some turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen *	mg/L	0.05	0.1	3.7	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	1744	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Warunyoo Chimphalee , Samart Khumphlee

Remark :

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0009

Lot ID: 2527771

Date Received : Apr 21, 2025

Date Reported : Apr 28, 2025

Report Number : 3264730-1

Page 1 of 1

Sample Number	2527771-1						
Sampled Date	Apr 21, 2025 9:46 AM						
Sample Description	Effluent:						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	Apr 22, 2025						
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid, and no turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	1700.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Samart Khumphlee

Remark :

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- Sampling is no; included in scope of accreditation ISO/IEC 17025

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042

Lot ID: 2536559

Date Received : May 02, 2025

Date Reported : May 09, 2025

Report Number : 3285910-1

Page 1 of 2

Sample Number	2536559-1						
Sampled Date	May 02, 2025 9:48 AM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	May 02, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, some solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	17.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	54	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	18	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	17	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.0	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	29.9	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1072	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong

Technical Management



ทะเบียนเลขที่ ว-323-จ-0028

ทะเบียนเลขที่ ว-523-จ-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042

Lot ID: 2536559

Date Received : May 02, 2025

Date Reported : May 09, 2025

Report Number : 3285910-1

Page 2 of 2

Sample Number	2536559-1						
Sampled Date	May 02, 2025 9:48 AM						
Sample Description	Influent:						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	May 02, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, some solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	15.6	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	24	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Surawit Narapong ทะเบียนเลขที่ ร-323-จ-0011 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ร-204-จ-0002

Remark :

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Technical Management

Scientist (4)

ทะเบียนเลขที่ ร-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ร-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0009

Lot ID: 2536559

Date Received : May 02, 2025

Date Reported : May 10, 2025

Report Number : 3285910-2

Page 1 of 2

Sample Number	2536559-1						
Sampled Date	May 02, 2025 9:48 AM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	May 06, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, some solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.64	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Lead	mg/L	0.0003	0.0005	0.002	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.04	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Scientist (3)

ทะเบียนเลขที่ ร-204-จ-0018

Assistant General Manager

ทะเบียนเลขที่ ร-204-ค-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2536559

Date Received : May 02, 2025

Date Reported : May 10, 2025

Report Number : 3285910-2

Page 2 of 2

Sample Number 2536559-1
Sampled Date May 02, 2025 9:48 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced May 06, 2025
Condition of Sample Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.47	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	121	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Surawit Narapong ทะเบียนเลขที่ 7-323-จ-0011 , Pattarapol Sawangjaitam ทะเบียนเลขที่ 7-204-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.
- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (3)

ทะเบียนเลขที่ 7-204-จ-0018

Assistant General Manager

ทะเบียนเลขที่ 7-204-จ-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2536559

Date Received : May 02, 2025

Date Reported : May 10, 2025

Report Number : 3285910-3

Page 1 of 1

Sample Number 2536559-1
Sampled Date May 02, 2025 9:48 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced May 02, 2025
Condition of Sample Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, some solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	700000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.05	0.1	9.3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	1572	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Surawit Narapong , Pattarapol Sawangjaitam

Remark :

- LOD : Limit of Detection
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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042

Lot ID: 2536559

Date Received : May 02, 2025

Date Reported : May 09, 2025

Report Number : 3285910-4

Page 1 of 1

Sample Number	2536559-1						
Sampled Date	May 02, 2025 9:48 AM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	May 03, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, some solid and turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed., 2004	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Surawit Narapong ทะเบียนเลขที่ ๖-323-๖-0011 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

Remark :

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- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042

Lot ID: 2536560

Date Received : May 02, 2025

Date Reported : May 09, 2025

Report Number : 3285911-1

Page 1 of 2

Sample Number	2536560-1						
Sampled Date	May 02, 2025 9:56 AM						
Sample Description	Effluent						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	May 02, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	7.2	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	25	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	12	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	11	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.6	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	31.2	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	872	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong

Technical Management

Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 2536560

Date Received : May 02, 2025

Date Reported : May 09, 2025

Report Number : 3285911-1

Page 2 of 2

Sample Number	2536560-1						
Sampled Date	May 02, 2025 9:56 AM						
Sample Description	Effluent:						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	May 02, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	9.6	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	5	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Surawit Narapong ทะเบียนเลขที่ 7-323-ก-0011, Pattarapol Sawangjaitam ทะเบียนเลขที่ 7-204-ก-0002

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Technical Management

Scientist (4)

ทะเบียนเลขที่ 7-323-ก-0028

Senior Manager

ทะเบียนเลขที่ 7-323-ก-0001

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2536560

Date Received : May 02, 2025

Date Reported : May 10, 2025

Report Number : 3285911-2

Page 1 of 2

Sample Number	2536560-1						
Sampled Date	May 02, 2025 9:56 AM						
Sample Description	Effluent						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	May 06, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.28	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.0008	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.05	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Scientist (3)

ทะเบียนเลขที่ 7-204-ก-0018

Assistant General Manager

ทะเบียนเลขที่ 7-204-ก-0004

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Analysis / Test Report

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331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2536560

Date Received : May 02, 2025

Date Reported : May 10, 2025

Report Number : 3285911-2

Page 2 of 2

Sample Number	2536560-1
Sampled Date	May 02, 2025 9:56 AM
Sample Description	Effluent:
Location	WHA CIE1 : WWTP
Date Analysis Commenced	May 06, 2025
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.40	≤5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	19.1	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Surawit Narapong ทะเบียนเลขที่ ๖-323-๖-0011, Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

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- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management



Scientist (3)
ทะเบียนเลขที่ ๖-204-๖-0018

Assistant General Manager
ทะเบียนเลขที่ ๖-204-๖-0004

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2536560

Date Received : May 02, 2025

Date Reported : May 09, 2025

Report Number : 3285911-3

Page 1 of 1

Sample Number	2536560-1
Sampled Date	May 02, 2025 9:56 AM
Sample Description	Effluent
Location	WHA CIE1 : WWTP
Date Analysis Commenced	May 02, 2025
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.05	0.1	7.1	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	1420	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

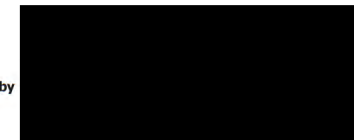
Sampling By : Surawit Narapong , Pattarapol Sawangjaitam

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042

Lot ID: 2536560

Date Received : May 02, 2025

Date Reported : May 09, 2025

Report Number : 3285911-4

Page 1 of 1

Sample Number	2536560-1
Sampled Date	May 02, 2025 9:56 AM
Sample Description	Effluent:
Location	WHA CIE1 : WWTP
Date Analysis Commenced	May 03, 2025
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1.0	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed., 2004	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Surawit Narapong ทะเบียนเลขที่ ๖-323-๖-0011 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

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- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management



Scientist (4)
ทะเบียนเลขที่ ๖-323-๖-0028

Senior Manager
ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0009

Lot ID: 2536567

Date Received : May 14, 2025

Date Reported : May 21, 2025

Report Number : 3285919-1

Page 1 of 1

Sample Number	2536567-1
Sampled Date	May 14, 2025 2:40 PM
Sample Description	Effluent
Location	WHA CIE1 : WWTP
Date Analysis Commenced	May 15, 2025
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA USEPA)
Physical Property	Yellow, some odour, solid and turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	13000.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Pattarapol Sawangjaitam

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.
- Sampling is not included in scope of accreditation ISO/IEC 17025

Approved by



Section Head

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

TESTING

No.0042

Lot ID: 2536564

Date Received : May 19, 2025

Date Reported : May 26, 2025

Report Number : 3285915-1

Page 1 of 2

Sample Number	2536564-1						
Sampled Date	May 19, 2025 10:10 AM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	May 19, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, some solid and no turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	14.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	37	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	15	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	13	≤600	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C	-	-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	31.8	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	388	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong

Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

TESTING

No.0042

Lot ID: 2536564

Date Received : May 19, 2025

Date Reported : May 26, 2025

Report Number : 3285915-1

Page 2 of 2

Sample Number	2536564-1						
Sampled Date	May 19, 2025 10:10 AM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	May 19, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, some solid and no turbid						
Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	7.3	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	16	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

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

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- Sampling is not included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (4)

ทะเบียนเลขที่ ว-323-จ-0028

Senior Manager

ทะเบียนเลขที่ ว-323-จ-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2536564

Date Received : May 19, 2025

Date Reported : May 26, 2025

Report Number : 3285915-2

Page 1 of 2

Sample Number 2536564-1
Sampled Date May 19, 2025 10:10 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced May 20, 2025
Condition of Sample Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, some solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.003	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.62	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.0009	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	<0.0005	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.03	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Manager

ทะเบียนเลขที่ ว-204-จ-0007

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2536564

Date Received : May 19, 2025

Date Reported : May 26, 2025

Report Number : 3285915-2

Page 2 of 2

Sample Number 2536564-1
Sampled Date May 19, 2025 10:10 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced May 20, 2025
Condition of Sample Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, some solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.12	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	20.7	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

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

Remark :

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Technical Management

Manager

ทะเบียนเลขที่ ว-204-จ-0007

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2536564

Date Received : May 19, 2025

Date Reported : May 26, 2025

Report Number : 3285915-3

Page 1 of 1

Sample Number	2536564-1						
Sampled Date	May 19, 2025 10:10 AM						
Sample Description	Influent						
Location	WHA CIE1 : Pumping Station						
Date Analysis Commenced	May 19, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, a lot of odour, some solid and no turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	240000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.05	0.1	3.3	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	827	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Nattawut Athomprommarat , Pattarapol Sawangjaitam

Remark :

- LOD : Limit of Detection
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Manager

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 2536565

Date Received : May 19, 2025

Date Reported : May 26, 2025

Report Number : 3285916-1

Page 1 of 2

Sample Number	2536565-1						
Sampled Date	May 19, 2025 10:15 AM						
Sample Description	Effluent						
Location	WHA CIE1 : WWTP						
Date Analysis Commenced	May 19, 2025						
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)						
Physical Property	Yellow, some odour, solid and no turbid						

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	<2.0	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	<25	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Color (at Original pH)	ADMI	-	5	16	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Color (at pH 7.0)	ADMI	-	5	14	≤300	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2120 F	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	31.8	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	816	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong

Technical Management



ผู้จัดการฝ่ายเทคนิค 2536565-0026

ผู้จัดการฝ่ายเทคนิค 2536565-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 2536565

Date Received : May 19, 2025

Date Reported : May 26, 2025

Report Number : 3285916-1

Page 2 of 2

Sample Number	2536565-1
Sampled Date	May 19, 2025 10:15 AM
Sample Description	Effluent:
Location	WHA CIE1 : WWTP
Date Analysis Commenced	May 19, 2025
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	10.4	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Nattawut Athomprommarat ทะเบียนเลขที่ ๖-323-๖-0006 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

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.
- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (4)

ทะเบียนเลขที่ ๖-323-๖-0028

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2536565

Date Received : May 19, 2025

Date Reported : May 26, 2025

Report Number : 3285916-2

Page 1 of 2

Sample Number	2536565-1
Sampled Date	May 19, 2025 10:15 AM
Sample Description	Effluent
Location	WHA CIE1 : WWTP
Date Analysis Commenced	May 20, 2025
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.002	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.55	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Lead	mg/L	0.0003	0.0005	0.0008	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.04	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Manager

ทะเบียนเลขที่ ๖-204-๖-0007

Assistant General Manager

ทะเบียนเลขที่ ๖-204-๖-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2536565

Date Received : May 19, 2025

Date Reported : May 26, 2025

Report Number : 3285916-2

Page 2 of 2

Sample Number	2536565-1
Sampled Date	May 19, 2025 10:15 AM
Sample Description	Effluent:
Location	WHA CIE1 : WWTP
Date Analysis Commenced	May 20, 2025
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.39	≤5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	18.2	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : นันทวัฒน์ อัฒปรรมาต ทะเบียนเลขที่ ว-323-ก-0006 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-ก-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.
- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management



Manager
ทะเบียนเลขที่ ว-204-ก-0007

Assistant General Manager
ทะเบียนเลขที่ ว-204-ก-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2536565

Date Received : May 19, 2025

Date Reported : May 26, 2025

Report Number : 3285916-3

Page 1 of 1

Sample Number	2536565-1
Sampled Date	May 19, 2025 10:15 AM
Sample Description	Effluent
Location	WHA CIE1 : WWTP
Date Analysis Commenced	May 19, 2025
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.05	0.1	6.7	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	1411	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : นันทวัฒน์ อัฒปรรมาต , Pattarapol Sawangjaitam

Remark :

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Scientist (4)

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2536568

Date Received : May 19, 2025

Date Reported : May 26, 2025

Report Number : 3285918-1

Page 1 of 1

Sample Number	2536568-1
Sampled Date	May 19, 2025 10:25 AM
Sample Description	Effluent:
Location	WHA CIE1 : WWTP
Date Analysis Commenced	May 20, 2025
Condition of Sample	Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	790.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Pattarapol Sawangjaitam

Remark :

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- Sampling is no; included in scope of accreditation ISO/IEC 17025

Approved by

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 2547871

Date Received : Jun 02, 2025

Date Reported : Jun 09, 2025

Report Number : 3310555-1

Page 1 of 2

Sample Number	2547871-1
Sampled Date	Jun 02, 2025 9:53 AM
Sample Description	Influent
Location	WHA CIE1 : Pumping Station
Date Analysis Commenced	Jun 02, 2025
Condition of Sample	Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	18.2	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	44	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	31.3	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	676	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	6.5	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	15	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Scientist (2)

ทะเบียนเลขที่ ๖-323-๖-0004

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2547871

Date Received : Jun 02, 2025

Date Reported : Jun 09, 2025

Report Number : 331C555-1

Page 2 of 2

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Suphanat Sakulittimasak ทะเบียนเลขที่ 3-323-จ-0021 , Pattarapol Sawangjaitam ทะเบียนเลขที่ 3-204-จ-0002

Remark :

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Technical Management

Scientist (2)

ทะเบียนเลขที่ 3-323-จ-0004

Senior Manager

ทะเบียนเลขที่ 3-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0009
Lot ID: 2547871

Date Received : Jun 02, 2025

Date Reported : Jun 10, 2025

Report Number : 3310555-2

Page 1 of 2

Sample Number : 2547871-1
Sampled Date : Jun 02, 2025 9:53 AM
Sample Description : Influent
Location : WHA CIE1 : Pumping Station
Date Analysis Commenced : Jun 04, 2025
Condition of Sample : Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.003	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.48	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	<0.0005	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.04	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Manager

ทะเบียนเลขที่ 3-204-จ-0007

Assistant General Manager

ทะเบียนเลขที่ 3-204-ค-0004

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Analysis / Test Report

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Thailand 20230

P/O :
Project Name :
Project Location : WHA CIE 1



TESTING
No.0009
Lot ID: 2547871
Date Received : Jun 02, 2025
Date Reported : Jun 10, 2025
Report Number : 331C555-2

Page 2 of 2

Sample Number 2547871-1
Sampled Date Jun 02, 2025 9:53 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced Jun 04, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.26	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	27.7	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Suphanat Sakulkittimasak ทะเบียนเลขที่ ๖-323-๖-0021 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

Remark :
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Technical Management

ทะเบียนเลขที่ ๖-204-๖-0007

ทะเบียนเลขที่ ๖-204-๖-0004

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Thailand 20230

P/O :
Project Name :
Project Location : WHA CIE 1



TESTING
No.0009
Lot ID: 2547871
Date Received : Jun 02, 2025
Date Reported : Jun 10, 2025
Report Number : 3310555-3

Page 1 of 1

Sample Number 2547871-1
Sampled Date Jun 02, 2025 9:53 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced Jun 02, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	490000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.05	0.1	3.5	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	1137	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Suphanat Sakulkittimasak , Pattarapol Sawangjaitam

Remark :
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Scientist (3)

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 2547871

Date Received : Jun 02, 2025

Date Reported : Jun 09, 2025

Report Number : 331C555-4

Page 1 of 1

Sample Number 2547871-1
Sampled Date Jun 02, 2025 9:53 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced Jun 04, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Formaldehyde	mg/L	0.03	0.1	0.2	≤1	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed., 2004	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Suphanat Sakulkittimasak ทะเบียนเลขที่ ๖-323-๖-0021 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ๖-204-๖-0002

Remark :

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Technical Management

Scientist (2)

ทะเบียนเลขที่ ๖-323-๖-0004

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 2547872

Date Received : Jun 02, 2025

Date Reported : Jun 09, 2025

Report Number : 3310557-1

Page 1 of 2

Sample Number 2547872-1
Sampled Date Jun 02, 2025 10:15 AM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Jun 02, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	11.8	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	33	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.5	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	32.6	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1090	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	3.4	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	7	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Scientist (2)

ทะเบียนเลขที่ ๖-323-๖-0004

Senior Manager

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042

Lot ID: 2547872

Date Received : Jun 02, 2025

Date Reported : Jun 09, 2025

Report Number : 331C557-1

Page 2 of 2

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Suphanat Sakulittimasak ทะเบียนเลขที่ 3-323-จ-0021 , Pattarapol Sawangjaitam ทะเบียนเลขที่ 3-204-จ-0002

Remark :

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- "<" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
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- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (2)

ทะเบียนเลขที่ 3-323-จ-0004

Senior Manager

ทะเบียนเลขที่ 3-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0009

Lot ID: 2547872

Date Received : Jun 02, 2025

Date Reported : Jun 10, 2025

Report Number : 3310557-2

Page 1 of 2

Sample Number : 2547872-1
Sampled Date : Jun 02, 2025 10:15 AM
Sample Description : Effluent
Location : WHA CIE1 : WWTP
Date Analysis Commenced : Jun 04, 2025
Condition of Sample : Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, a lot of odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.003	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.55	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	0.0006	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.10	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Manager

ทะเบียนเลขที่ 3-204-จ-0007

Assistant General Manager

ทะเบียนเลขที่ 3-204-ค-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2547872

Date Received : Jun 02, 2025

Date Reported : Jun 10, 2025

Report Number : 331C557-2

Page 2 of 2

Sample Number 2547872-1
Sampled Date Jun 02, 2025 10:15 AM
Sample Description Effluent:
Location WHA CIE1 : WWTP
Date Analysis Commenced Jun 04, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.44	≤5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B, 3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	18.6	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Suphanat Sakulkittimasak ทะเบียนเลขที่ ว-323-ก-0021 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-ก-0002

Remark :

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- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management

Manager
ทะเบียนเลขที่ ว-204-ก-0007

Assistant General Manager
ทะเบียนเลขที่ ว-204-ก-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2547872

Date Received : Jun 02, 2025

Date Reported : Jun 09, 2025

Report Number : 3310557-3

Page 1 of 1

Sample Number 2547872-1
Sampled Date Jun 02, 2025 10:15 AM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Jun 02, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, a lot of odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.05	0.1	5.2	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	1747	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Suphanat Sakulkittimasak , Pattarapol Sawangjaitam

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 2547872

Date Received : Jun 02, 2025

Date Reported : Jun 09, 2025

Report Number : 331C557-4

Page 1 of 1

Sample Number 2547872-1
Sampled Date Jun 02, 2025 10:15 AM
Sample Description Effluent:
Location WHA CIE1 : WWTP
Date Analysis Commenced Jun 04, 2025
Condition of Sample Contained in one amber glass bottle, two glass vials and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA USEPA)
Physical Property Yellow, a lot of odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Formaldehyde	mg/L	0.03	0.1	Not Detected	≤1.0	Wastewater analysis manual, Environmental Engineering Association of Thailand, 4th ed., 2004	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Suphanat Sakulkittimasak ทะเบียนเลขที่ ร-323-ก-0021 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ร-204-ก-0002

Remark :

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Technical Management

Scientist (2)

ทะเบียนเลขที่ ร-323-ก-0004

Senior Manager

ทะเบียนเลขที่ ร-323-ก-0001

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2547879

Date Received : Jun 02, 2025

Date Reported : Jun 10, 2025

Report Number : 3310608-1

Page 1 of 1

Sample Number 2547879-1
Sampled Date Jun 02, 2025 10:15 AM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Jun 03, 2025
Condition of Sample Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA USEPA)
Physical Property Yellow, a lot of odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	1700.0	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Pattarapol Sawangjaitam

Remark :

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 2547876

Date Received : Jun 16, 2025

Date Reported : Jun 23, 2025

Report Number : 331C583-1

Page 1 of 2

Sample Number : 2547876-1
Sampled Date : Jun 16, 2025 9:40 AM
Sample Description : Influent
Location : WHA CIE1 : Pumping Station
Date Analysis Commenced : Jun 16, 2025
Condition of Sample : Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA USEPA)
Physical Property : Yellow, some odour, a lot of solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	15.4	≤500	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	48	≤750	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤10	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.1	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	31.4	≤45	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1130	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	5.7	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	13	≤200	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management

Scientist (2)

ทะเบียนเลขที่ ว-323-จ-0004

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 2547876

Date Received : Jun 16, 2025

Date Reported : Jun 23, 2025

Report Number : 3310583-1

Page 2 of 2

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Warunyooy Chimphalee ทะเบียนเลขที่ ว-323-จ-0020 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

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Technical Management

Scientist (2)

ทะเบียนเลขที่ ว-323-จ-0004

Senior Manager

ทะเบียนเลขที่ ว-323-ค-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2547876

Date Received : Jun 16, 2025

Date Reported : Jun 23, 2025

Report Number : 331C583-2

Page 1 of 2

Sample Number : 2547876-1
Sampled Date : Jun 16, 2025 9:40 AM
Sample Description : Influent
Location : WHA CIE1 : Pumping Station
Date Analysis Commenced : Jun 17, 2025
Condition of Sample : Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, some odour, a lot of solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.003	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.69	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	Not Detected	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.25	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Section Head

ทะเบียนเลขที่ ว-204-จ-0008

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2547876

Date Received : Jun 16, 2025

Date Reported : Jun 23, 2025

Report Number : 3310583-2

Page 2 of 2

Sample Number : 2547876-1
Sampled Date : Jun 16, 2025 9:40 AM
Sample Description : Influent
Location : WHA CIE1 : Pumping Station
Date Analysis Commenced : Jun 17, 2025
Condition of Sample : Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property : Yellow, some odour, a lot of solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.76	≤5.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	12.1	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

Sampling By : Warunyoo Chimphalee ทะเบียนเลขที่ ว-323-จ-0020 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-จ-0002

Remark :

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Technical Management

Section Head

ทะเบียนเลขที่ ว-204-จ-0008

Assistant General Manager

ทะเบียนเลขที่ ว-204-ค-0004

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2547876

Date Received : Jun 16, 2025

Date Reported : Jun 23, 2025

Report Number : 331C583-3

Page 1 of 1

Sample Number 2547876-1
Sampled Date Jun 16, 2025 9:40 AM
Sample Description Influent
Location WHA CIE1 : Pumping Station
Date Analysis Commenced Jun 16, 2025
Condition of Sample Contained in two glass vials, one amber glass bottle and seven plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, a lot of solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	70000.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok
Water Testing							
Ammonia Nitrogen *	mg/L	0.05	0.1	2.9	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C *	micromhos/cm	-	0.5	1818	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Notification of the Industrial Estate Authority of Thailand No.029/2567 : General Standards for Wastewater drainage into central wastewater treatment systems in Industrial Estates.

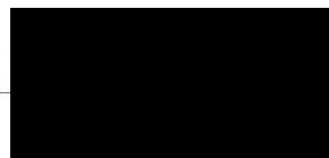
Sampling By : Warunyoo Chimphalee , Pattarapol Sawangjattam

Remark :

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0042

Lot ID: 2547877

Date Received : Jun 16, 2025

Date Reported : Jun 23, 2025

Report Number : 3310604-1

Page 1 of 2

Sample Number 2547877-1
Sampled Date Jun 16, 2025 9:50 AM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Jun 16, 2025
Condition of Sample Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
BOD (5 days at 20 Degree C)	mg/L	-	2.0	13.1	≤20	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5210 B, part 4500 - O G	Rayong
COD	mg/L	1.5	25	46	≤120	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5220 D	Rayong
Oil & Grease	mg/L	-	3	<3	≤5	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 5520 B	Rayong
pH at 25 degree C		-	-	7.3	5.5-9.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500 - H (B)	Rayong
Temperature *	Degree C	-	-	30.7	≤40	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2550 B	Rayong
Total Dissolved Solids Dried at 180 degree C	mg/L	-	5	1090	≤3000	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 C	Rayong
Total Kjeldahl Nitrogen as N	mg/L	-	1.0	7.4	≤100	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 4500-Norg (C), part NH3 (D)	Rayong
Total Suspended Solids Dried at 103-105 degree C	mg/L	-	5	9	≤50	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 2540 D	Rayong

Technical Management



ทะเบียนเลขที่ ๖-323-๖-0004

ทะเบียนเลขที่ ๖-323-๖-0001

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Analysis / Test Report

Client : WHA Utilities and Power Public Company Limited
331/8-9 Moo 6, High Way No.331 Road, Tambol Bowin, Amphur Sriracha, Chonburi
Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0042
Lot ID: 2547877

Date Received : Jun 16, 2025

Date Reported : Jun 23, 2025

Report Number : 3310604-1

Page 2 of 2

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Warunyoo Chimphalee ทะเบียนเลขที่ ร-323-ก-0020 , Pattarapol Sawangjaitam ทะเบียนเลขที่ ร-204-ก-0002

Remark :

- LOD : Limit of Detection
- "c" : Lower than LOQ (Limit of Quantitation) / LOR (Limit of Reporting)
- Analyte(s) marked * is/are not included in scope of Accreditation ISO/IEC 17025.
- Sampling is no: included in scope of accreditation ISO/IEC 17025

Technical Management

Scientist (2)

ทะเบียนเลขที่ ร-323-ก-0004

Senior Manager

ทะเบียนเลขที่ ร-323-ก-0001

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING
No.0009
Lot ID: 2547877

Date Received : Jun 16, 2025

Date Reported : Jun 23, 2025

Report Number : 3310604-2

Page 1 of 2

Sample Number 2547877-1
Sampled Date Jun 16, 2025 9:50 AM
Sample Description Effluent
Location WHA CIE1 : WWTP
Date Analysis Commenced Jun 17, 2025
Condition of Sample Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Arsenic	mg/L	0.0003	0.0005	0.003	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Cadmium	mg/L	0.0003	0.0005	Not Detected	≤0.03	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Copper	mg/L	0.0003	0.0005	0.62	≤2.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Hexavalent Chromium	mg/L	0.003	0.01	Not Detected	≤0.25	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3500-Cr B	Bangkok
Lead	mg/L	0.0003	0.0005	<0.0005	≤0.2	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Mercury *	mg/L	0.0001	0.0005	Not Detected	≤0.005	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3112	Bangkok
Nickel	mg/L	0.0003	0.0005	0.26	≤1.0	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok

Technical Management

Section Head

ทะเบียนเลขที่ ร-204-ก-0008

Assistant General Manager

ทะเบียนเลขที่ ร-204-ก-0004

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Analysis / Test Report

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1



TESTING

No.0009

Lot ID: 2547877

Date Received : Jun 16, 2025

Date Reported : Jun 23, 2025

Report Number : 3310604-2

Page 2 of 2

Sample Number	2547877-1
Sampled Date	Jun 16, 2025 9:50 AM
Sample Description	Effluent:
Location	WHA CIE1 : WWTP
Date Analysis Commenced	Jun 17, 2025
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Metals Testing							
Zinc	mg/L	0.003	0.005	0.38	≤5.0	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 3125 B,3030 F	Bangkok
Water Testing							
Total Phosphorus as P *	mg/L	0.2	0.5	12.6	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-P (B, E)	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Warunyoo Chimphalee ทะเบียนเลขที่ ว-323-ก-0020, Pattarapol Sawangjaitam ทะเบียนเลขที่ ว-204-ก-0002

Remark :

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Technical Management

Section Head

ทะเบียนเลขที่ ว-204-ก-0008

Assistant General Manager

ทะเบียนเลขที่ ว-204-ก-0004

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

Lot ID: 2547877

Date Received : Jun 16, 2025

Date Reported : Jun 23, 2025

Report Number : 3310604-3

Page 1 of 1

Sample Number	2547877-1
Sampled Date	Jun 16, 2025 9:50 AM
Sample Description	Effluent
Location	WHA CIE1 : WWTP
Date Analysis Commenced	Jun 16, 2025
Condition of Sample	Contained in two glass vials, one amber glass bottle and six plastic bottles, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property	Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Water Testing							
Ammonia Nitrogen	mg/L	0.05	0.1	4.7	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 4500-NH3 (D)	Rayong
Conductivity at 25 Degree C	micromhos/cm	-	0.5	1723	No Standard	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA & WEF, 24th ed., 2023, part 2510 B	Rayong

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

Sampling By : Warunyoo Chimphalee , Pattarapol Sawangjaitam

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Scientist (2)

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Thailand 20230

P/O :

Project Name :

Project Location : WHA CIE 1

TESTING

No.0009

Lot ID: 2547880

Date Received : Jun 16, 2025

Date Reported : Jun 23, 2025

Report Number : 331C609-1

Page 1 of 1

Sample Number 2547880-1
Sampled Date Jun 16, 2025 9:55 AM
Sample Description Effluent:
Location WHA CIE1 : WWTP
Date Analysis Commenced Jun 17, 2025
Condition of Sample Contained in one plastic bottle, sample containers comply to pretreatment - preservation standards (APHA, USEPA)
Physical Property Yellow, some odour, solid and no turbid

Analyte	Unit	LOD	LOQ (LOR)	Result	Guideline / Specification	Method	Testing Location
Microbiological Testing							
Total Coliform	MPN/100mL	-	-	2400.0	No Standard	Standard Methods for the Examination of Water and Wastewater. APHA, AWWA & WEF, 24th ed., 2023, part 9221 B	Bangkok

Guideline : Effluent standard for factories, industrial estate and industrial park set by Notification of the Ministry of Natural Resource and Environment and effluent standard for factories and industrial park set by Notification of The Ministry of Industry dated June 07, B.E.2560 (2017).

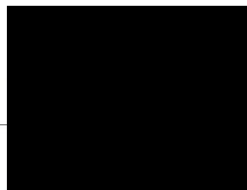
Sampling By : Pattarapol Sawangjaitam

Remark :

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- Sampling is no: included in scope of accreditation ISO/IEC 17025

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